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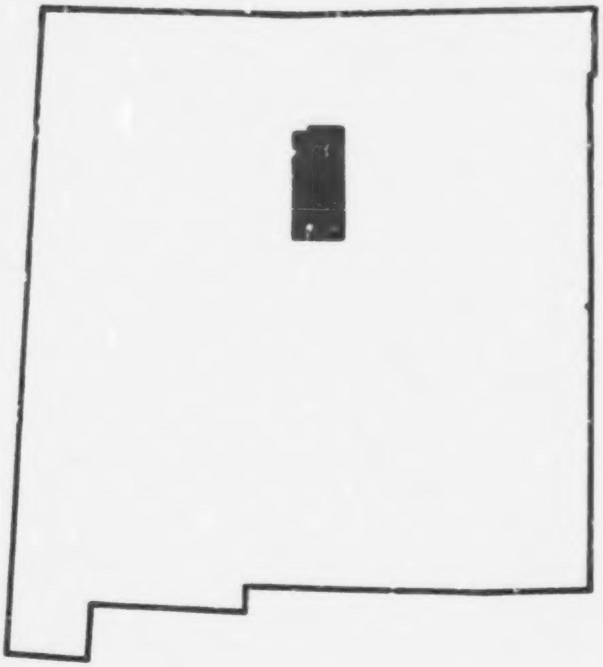
FLOOD INSURANCE STUDY

SANTA FE COUNTY, NEW MEXICO
UNINCORPORATED AREAS



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NOVEMBER 4, 1988

COMPLETED

Federal Emergency Management Agency

COMMUNITY NUMBER - 350069

ORIGINAL

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance study purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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FLOOD INSURANCE STUDY
UNINCORPORATED AREAS OF SANTA FE COUNTY, NEW MEXICO

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the unincorporated areas of Santa Fe County, New Mexico, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgments

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for all the streams that were studied in detail, except for the Santa Cruz River, were prepared by Bohannan-Huston Inc., for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-85-C-1962. This work was completed in October 1986. The information for the Santa Cruz River was obtained from the limited detail flood insurance study for Rio Arriba County, prepared by the U. S. Geological Survey (USGS) under Inter-Agency Agreement No. 350049. This work was completed in April 1987.

1.3 Coordination

On February 13, 1985, an initial Consultation and Coordination Officer's (CCO) meeting was held with representatives of FEMA, the county, and Bohannan-Huston Inc. (the study contractor) to identify the streams to be studied by detailed methods. At this meeting, available community maps were discussed, and developing areas of Santa Fe County that are prone to flooding were identified. Results of the hydrologic analyses were coordinated with the U. S. Army Corps of Engineers (COE), the Soil Conservation Service (SCS), and the USGS. On November 17, 1987, the results of the study were reviewed at a final CCO meeting attended by representatives of FEMA, the county, and the study contractor.

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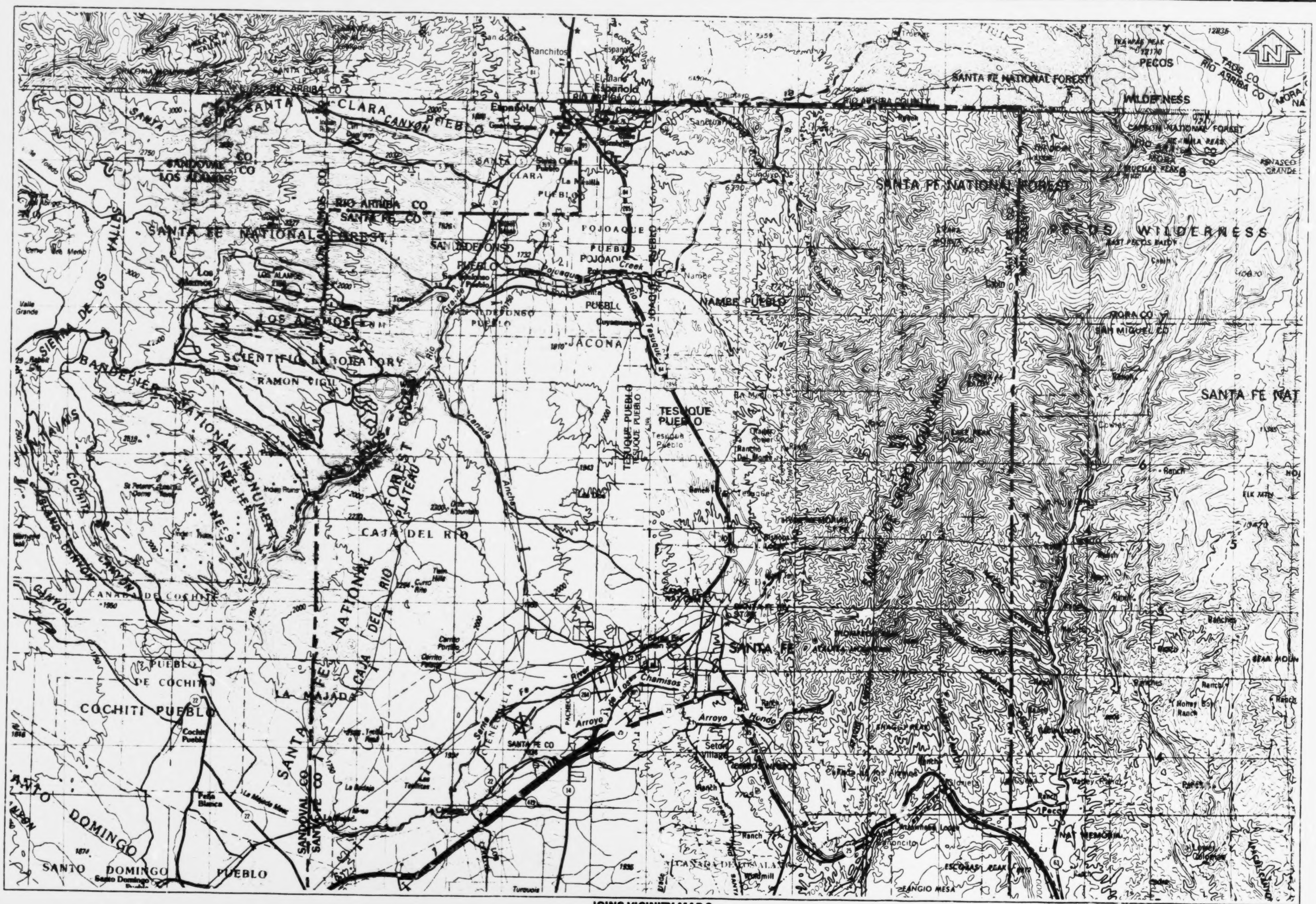
2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the unincorporated areas of Santa Fe County, New Mexico. The incorporated Cities of Espanola and Santa Fe, and the San Ildefonso and Nambe Indian Reservations are not included in this study. The area of study is shown on the Vicinity Map (Figure 1).

The following streams were studied by detailed methods: the Santa Fe River, from the Agua Fria Road crossing north of the Santa Fe River municipal airport to the City of Santa Fe corporate limits; Arroyo Hondo, from a point approximately 500 feet upstream of its confluence with Arroyo Chamisos to a point approximately 1,500 feet upstream of the Atchison, Topeka & Santa Fe Railway crossing; Arroyo de Los Chamisos, from a point approximately 550 feet upstream of its confluence with Arroyo Hondo to the City of Santa Fe corporate limits; and the Santa Cruz River, from a point approximately 1,850 feet upstream of the downstream Rio Arriba-Santa Fe county boundary to the upstream Rio Arriba-Santa Fe county boundary. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction through October 1991.

All or portions of the following flooding sources were studied by approximate methods: the Santa Cruz River, Arroyo de Las Trampas, Arroyo de Las Frijoles, Arroyo Gallina, Apache Canyon, Arroyo Chorro, Canada Delas Marie, Two Mile Reservoir, McClure Reservoir, Grant Arroyo, Canada del Rancho, Bonanza Creek, Arroyo Colorado, Gaviso Arroyo, Arroyo Puertacito de Los, Armijo Draw, Arroyo Seco, Big Tesuque Creek, the Pojoaque River, the Tesuque River, Cienga Creek, Galisteo Creek at Galisteo, Galisteo Creek below Glorieta, Arroyo los Barrancos, Arroyo Acequias, Arroyo Gigante, Arroyo de los Guardunos, Rio en Medio, Rio Nambe, Canada Ancha, Arroyo Calabas, Alamo Creek, Arroyo Cuma, the Santa Fe River, Arroyo de Los Chamisos, Arroyo Hondo, Canada de los Alamos, Arroyo Tetilla, Cueva Canyon Creek, Miller Gulch, Glorieta Creek, San Marcos Arroyo, Canada de la Cueva, Arroyo de los Angeles, Bobcat Canyon Creek, Arroyo Salado, Arroyo de la Jarra, Gaviso Arroyo, Santa Cruz Reservoir, Arroyo Madrid, Rio Quemado, the Rio Grande River, Guaje Canyon Creek, Pueblo Canyon Creek, Alamos Canyon Creek, Caja del Rio Canyon Creek, Rio Chupadero, Rio Tesuque, Arroyo Ancho, Arroyo Jaconito, Canada del Medio, Puertacito de los Salado, Canoneito Spring, Estacada Canada, San Cristobal Arroyo, Canada de las Narrias, King Draw, Hyer Draw, Big Draw, Kamradt Draw, Kinsell Draw, Franks Draw, Big Lake, Juan Tomas Canyon Creek, Bachelor Draw, Salt Draw, Cupido Draw, and Twin Lakes. Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon by, FEMA and the Santa Fe County.


SANTA CLARA CANYON
SANTA CLARA PUEBLO
Española
RIO ARRIBA CO
SANTA FE CO
SANDOVAL CO
LOS ALAMOS CO
SANTA FE NATIONAL FOREST
SAN ILDEFONSO PUEBLO
POJOAQUE PUEBLO
NAMBE PUEBLO
LOS ALAMOS
LOS ALAMOS SCIENTIFIC LABORATORY
JACONA
BANDELIER NATIONAL MONUMENT
BANDELIER WILDERNESS
SIERRA DE LOS VALLES
TESUQUE PUEBLO
CAJA DEL RIO
CAJA DEL RIO PLATEAU
CANADA DE COCHITI
PUEBLO DE COCHITI
COCHITI PUEBLO
LA MAJADA
SANTO DOMINGO PUEBLO
SANTA FE
Arroyo Hondo
Seton Village
PECOS
PECOS WILDERNESS
CARSON NATIONAL FOREST
MORA CO
SAN MIGUEL CO
TAOS CO
SANTA FE NAT

JOINS VICINITY MAP 2

APPROXIMATE SCALE

4 0 4 8 12 MILES

VICINITY MAP 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

FIGURE 1

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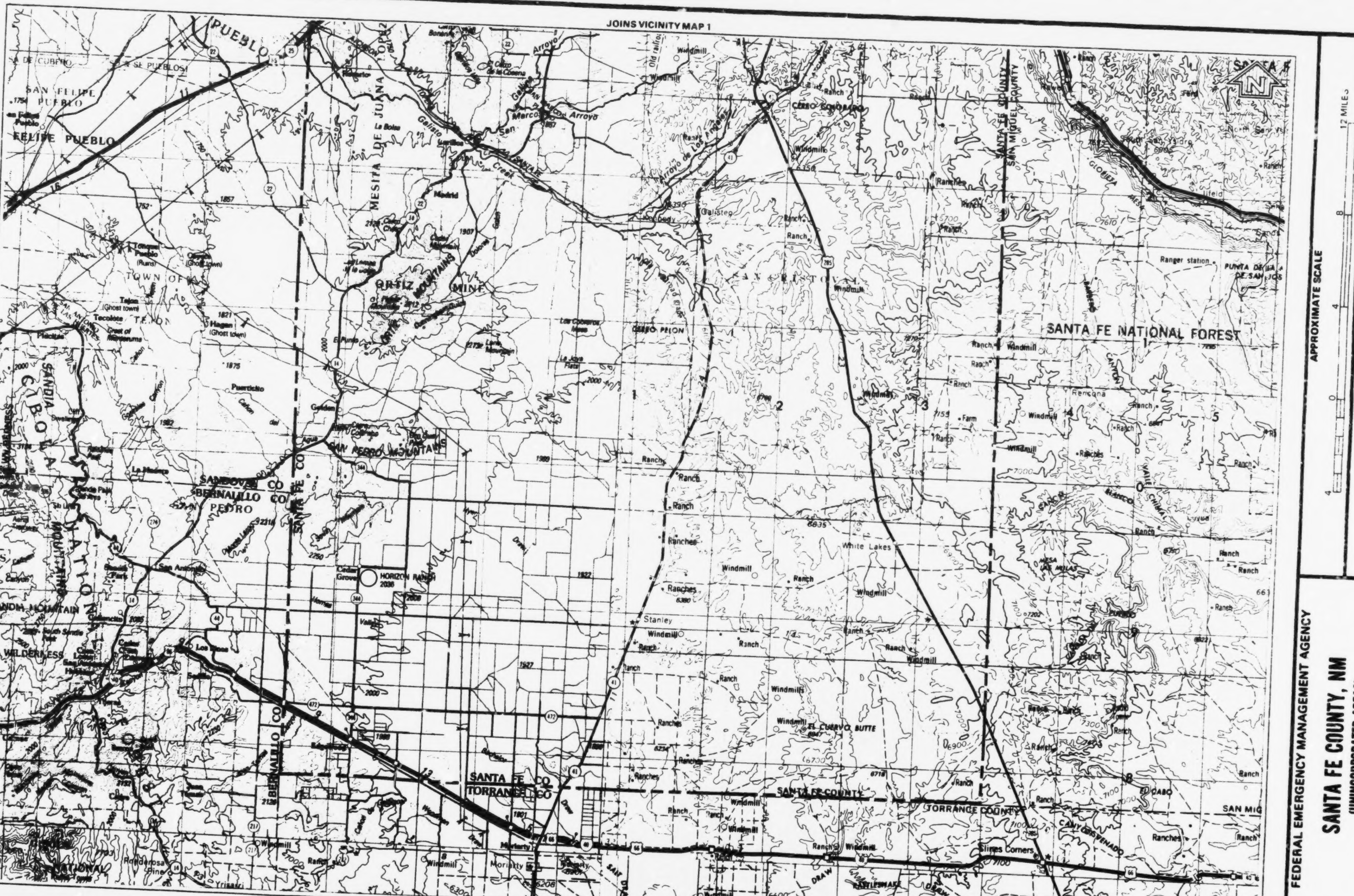
JOINS VICINITY MAP 1
APPROXIMATE SCALE
0
4
8
12 MILES
PUEBLO
SAN FELIPE PUEBLO
FELIPE PUEBLO
MESITA DE JUANA LOPEZ
Galisteo
Arroyo de Los Angeles
CERRO BONANZA
SANTA FE COUNTY
SAN MIGUEL COUNTY
GLORIETA
Ranger station
SANTA FE NATIONAL FOREST
ORTIZ MOUNTAINS
ORTIZ MINE
CERRO PELON
Golden
SAN PEDRO MOUNTAINS
SANDOVAL CO
BERNALILLO CO
SANTA FE CO
SAN PEDRO
CIBOLA
SANDIA
SANDIA MOUNTAIN
WILDERNESS
HORIZON RANCH
Cedar Grove
Stanley
White Lakes
Rencona
EL CUERVO BUTTE
SANTA FE CO
TORRANCE CO
SANTA FE COUNTY
TORRANCE COUNTY
SAN MIGUEL
CANON BLANCO
EL CABO
CANON DEL VENADO
Moriarty
Clines Corners
Ponderosa Pine
Yrisarri
Ranch
Windmill
Ranches

FIGURE 1

VICINITY MAP 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

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2.2 Community Description

Santa Fe County is located in north-central New Mexico northeast of the City of Albuquerque. It is bordered by the unincorporated areas of San Miguel County to the east; the unincorporated areas of Torrance County to the south; the unincorporated areas of Bernalillo County to the southwest; the unincorporated areas of Sandoval County to the west; the unincorporated areas of Los Alamos County, and the Cities of White Rock and Santa Domingo to the northwest; the unincorporated areas of Rio Arriba County, and the Cities of Santa Clara, Espanola, and Chimayo to the north; and the unincorporated areas of Mora County to the northeast.

The City of Santa Fe is located in the heart of Santa Fe County and is the oldest capital city in the United States. Various Indian tribes were the original inhabitants of the county. In the early 1600's, the Spanish began settling in the area. The northern Pueblo Indians drove the Spaniards out of the City of Santa Fe in 1680, and they held the settlement until 1692 when the Spanish recaptured the capital. In 1821, Mexico won independence from Spain and Santa Fe County was officially under Mexican jurisdiction. The United States occupied the area in 1846 and made New Mexico a U. S. Territory.

The Santa Fe Trail was a major thoroughfare from the east in the 1800's. This trail, along with the railroad, made the area a major trade center in the southwest. While trading was a major economic factor, the area also prospered from agriculture, lumbering, and various mining interests.

Today, Santa Fe County has a population of approximately 38,000. The area is growing at a moderate rate, and continued growth is anticipated in the future. Presently, the main economic sources are tourism, government operations, trade, agriculture, manufacturing, and mining. The area has a significant amount of tourism income due to the historic and cultural activities as well as the pleasant climate and recreational facilitites.

The Santa Fe River and Arroyo de Los Chamisos flow through the City of Santa Fe, while Arroyo Hondo lies just south of the corporate limits of the city. The Santa Cruz River flows through the City of Espanola. All four streams are tributaries of the Rio Grande River. The Santa Fe River is the principal drainage stream in the area, and Arroyo Hondo and Arroyo de Los Chamisos are tributaries. These streams are bordered by a mixture of residential, commercial, and industrial properties.

The Santa Fe River has a total drainage area of approximately 250 square miles where it enters the Rio Grande. Headwaters of the Santa Fe River are in the Sangre de Cristo Mountains. Elevations in the mountains reach over 12,000 feet. Santa Fe Lake is at an elevation of 11,600 feet and provides a perennial flow for the Santa Fe River in the high reaches. These flows are captured in a series of three reservoirs for municipal water supplies and any remainder is lost to the sandy soil in the lower elevations near the City of Santa Fe. The lower portions of the Santa Fe River are ephemeral with long periods of zero flow.

The Arroyo Hondo and Arroyo de Los Chamisos are similar to each other. Flows for these arroyos develop in the western foothills of the Sangre de Cristo mountains overlooking the City of Santa Fe at elevations between 6,500 to 8,000 feet. These arroyos are ephemeral with the exception of some lower sections where springs provide small perennial flows.

Santa Fe County is bordered by the Sangre de Cristo and Jemez Moutain ranges to the north, east, and west, while the southern portion lies in the central New Mexico plains. Vegetation in the high mountain areas consists of a variety of forest cover including large spruce, pines, juniper, and pinon trees. Heavy understory vegetation of brush, grasses, and wildflowers exists. In the lower elevations near the City of Santa Fe, vegetation changes dramatically due to the heat and lack of moisture. Sparse areas of smaller pinon and juniper exist with shrub brush; however, the largest percentage of cover consists of gramma and other grasses scattered across the exposed sandy soil.

Generally, the climate around Santa Fe County is semi-arid below elevations of 7,000 feet. The high mountain streams receive a significant amount of snowfall; however, for the most part, the populated areas of the county receive a majority of their moisture from rainfall in the summer months. The average annual precipitation in the City of Santa Fe is approximately 14 inches.

2.3 Principal Flood Problems

Most of the storms that produce large amounts of runoff occur in the months of June through September. Flood stages sometimes occur in these months when moist tropical air moves north out of the Gulf forming intense thunderstorms across the hot New Mexico land masses. Runoff occurring from these storms is generally termed flash flooding due to the large volumes of water that surge down the normally dry arroyo channels with high velocities.

Most historical information on past floods in the county center around the Santa Fe River. Arroyo Hondo and Arroyo de Los Chamisos are subject to the same flood conditions as the Santa Fe River and can be expected to behave in a similar manner. Major floods of record occurred on the Santa Fe River on August 24, 1957, and July 25, 1968 (Reference 1). Indirect measurements by the USGS resulted in discharge estimates of 1,450 and 3,420 cfs, respectively, measured on the Santa Fe River at Castillo Street. These flows have an estimated recurrence frequency of 4 and 15 years, respectively, based on the hydrology used for this study. There are several upstream reservoirs located on the Santa Fe River, but their effects on these two discharges are unknown.

A stream flow gaging station, Santa Cruz River at Cundiyo, operated on the Santa Cruz River since 130 has recorded a maximum discharge of 2,420 cfs in September 1931.

In general, 100-year magnitude discharges are confined to the main channel of the Santa Fe River in Santa Fe County and most of the development is on high ground. The 100-year magnitude discharges for Arroyo de Los Chamisos, Arroyo Hondo, and the Santa Cruz River are mostly confined to the channel, but there are some areas of low-lying overbank floodplains where development is occurring. Most of the undeveloped floodplain areas are used for cattle and agricultural purposes.

Flood photographs and potential 100-year flood heights on the Santa Fe River, Arroyo Hondo, and Arroyo de Los Chamisos are shown in Figures 2, 3, 4, 5, and 6.

Figure 2. Santa Fe River at Haake Construction Co. pit near the airport, looking northwest, during the flood of July 24, 1968.

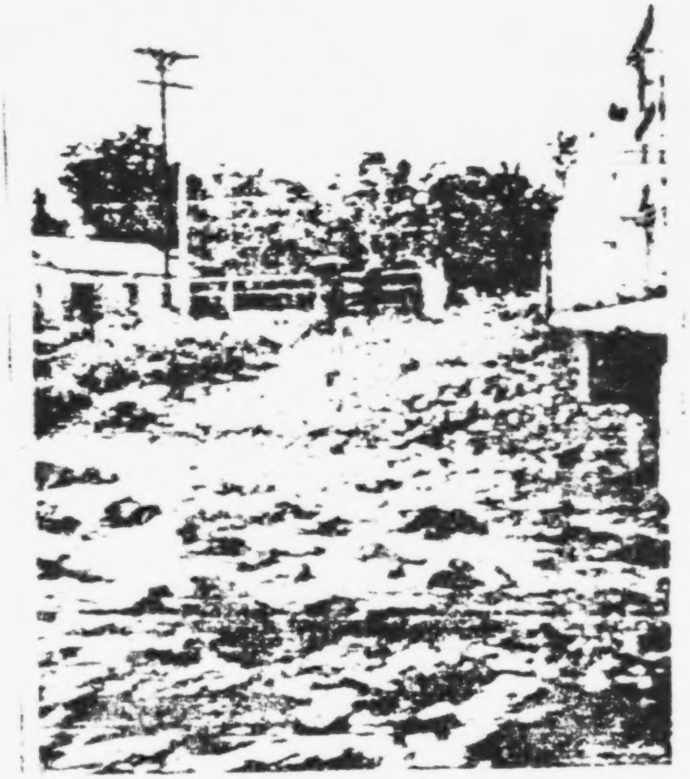

Figure 3. Santa Fe River at Camino Alire during the flood of July 24, 1968, looking downstream. The water is estimated to be 12 feet deep.

Figure 4. Potential 100-year flood height on the Santa Fe River at Forest Road 24 looking downstream.

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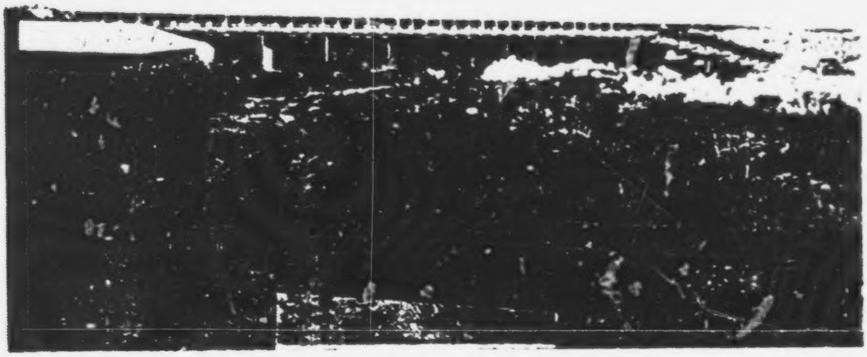

Figure 5. Potential 100-year flood height on Arroyo Hondo at State Route 14 looking downstream.

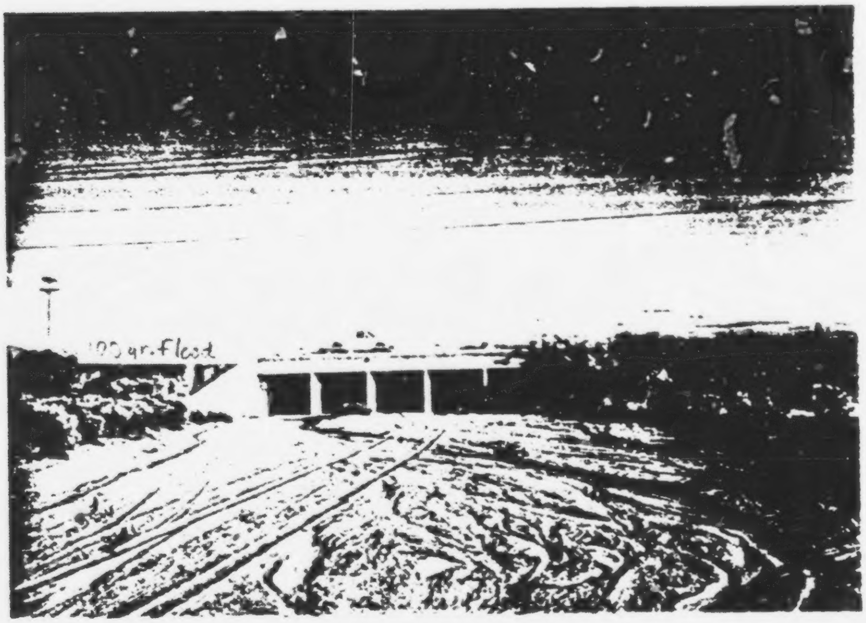

Figure 6. Potential 100-year flood height on Arroyo de Los Chamisos at Interstate Route 85 looking upstream.

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2.4 Flood Protection Measures

No major flood protection structures exist for the Santa Fe River, Arroyo Hondo, Arroyo de Los Chamisos, and the Santa Cruz River and none are currently planned. The municipal water supply reservoirs in the upstream watershed of the Santa Fe River tend to attenuate peak discharges for small storms. However, these reservoirs do not have designated flood control storage and will not attenuate major peak flows significantly. For purposes of this study, the reservoirs are assumed to have no effect on Santa Fe River discharges.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude which are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (1 percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each flooding source studied in detail affecting the community.

The hydrologic analysis for the Santa Cruz River was obtained from the Flood Insurance Study for the unincorporated areas of Rio Arriba County (Reference 2).

Flood flow frequency discharges determined for the remaining streams studied by detailed methods were based on statistical analysis of USGS gage data in the Santa Fe region with similar basin characteristics. A linear regression relationship was developed from 10 different gages that have drainage areas ranging from 0.5 to 120 square miles and periods of record from 20 to 35 years. Log-Pearson Type III frequency discharges were determined for each gage using Bulletin 17B (Reference 3). Next, a discharge versus drainage area equation was found for each frequency using linear regressions of the discharges.

A summary of the drainage area-peak discharge relationships for the streams studied by detailed methods is shown in Table 1, "Summary of Discharges."

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs)			
		10-YEAR	50-YEAR	100-YEAR	500-YEAR
SANTA FE RIVER					
From Camino de Los Lopez to north end of airport	51.3	3,780	7,920	10,170	16,570
From City of Santa Fe corporate limits to Camino de Los Lopez	47.6	3,600	7,590	9,770	16,000
ARROYO HONDO					
From Canada del Rancho to confluence with Arroyo de Los Chamisos	23.5	2,320	5,110	6,710	11,500
From 0.25 mile upstream of Atchison, Topeka & Santa Fe Railroad to confluence with Canada del Rancho	16.2	1,840	4,150	5,500	9,660
ARROYO DE LOS CHAMISOS					
From Interstate Route 85 to confluence with Arroyo Hondo	26.0	2,470	5,410	7,080	12,060
From Rodeo Road to Interstate Route 85	19.4	2,060	4,590	6,050	10,510
SANTA CRUZ RIVER					
At gaging station No. 08291000	86.0	*	*	2,140	*

*Data not available

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

The hydraulic analysis for the Santa Cruz River was obtained from the Flood Insurance Study for the unincorporated areas of Rio Arriba County (Reference 2).

Cross-section data for the backwater analyses of the Santa Fe River were obtained from topographic maps at a scale of 1:2,400 with a contour interval of 2 feet (Reference 4). Cross-section data for Arroyo Hondo, Arroyo de Los Chamisos, and the Santa Cruz River were obtained from field surveys. All bridges and culverts were field surveyed to obtain elevation data and structural geometry.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross-section locations are also shown on the Flood Insurance Rate Map (Exhibit 2).

Water-surface elevations of floods of the selected recurrence intervals for the Santa Fe River, Arroyo Hondo, and Arroyo de Los Chamisos were computed using the COE HEC-2 step-backwater computer program (Reference 5). Water-surface elevations of floods of the selected recurrence intervals for the Santa Cruz River were computed using the USGS WSPRO step-backwater computer program (Reference 6). Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals. Starting water-surface elevations for the Santa Fe River, Arroyo Hondo, and Arroyo de Los Chamisos were determined based on normal depth calculations. Starting water-surface elevations for the Santa Cruz River were determined using a series of synthesized cross sections downstream of the first lettered cross sections.

The upper reaches of the Santa Fe River and Arroyo Hondo were analyzed as supercritical flow. Slopes in these sections are well beyond critical, and there are few structures to act as controls to the flow; however, backwater was determined at structures in the supercritical reaches and shown on the profiles.

Channel roughness factors (Manning's "n") used in the hydraulic computations were chosen by engineering judgment and were based on field observations of the streams and floodplain areas. Channel and overbank "n" values for the streams studied by detailed methods are shown in the following tabulation:

Stream	Channel "n"	Overbank "n"
Santa Fe River	0.015-0.035	0.040
Arroyo Hondo	0.035-0.070	0.035-0.070
Arroyo de Los Chamisos	0.035-0.070	0.035-0.040
Santa Cruz River	0.034-0.035	0.040-0.047

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). Elevation reference marks used in this study are shown on the maps; the descriptions of the marks are presented in Elevation Reference Marks (Exhibit 3).

Boundaries for some of the flooding sources studied by approximate methods were determined using normal depth calculations, field inspection, and engineering judgment.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each Flood Insurance Study provides 100-year flood elevations and delineations of the 100- and 500-year floodplain boundaries and 100-year floodway to assist communities in developing floodplain management measures.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1 percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2 percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For the streams studied in detail, the 100- and 500-year floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:24,000 with a contour interval of 20 feet (Reference 7).

The areas of approximate flooding revised in this study were delineated using topographic maps at a scale of 1:24,000 and a contour interval of five feet. All other approximate flood areas were taken from the effective Flood Hazard Boundary Maps for the unincorporated areas of Santa Fe County (References 7 and 8).

The 100- and 500-year floodplain boundaries are shown on the Flood Insurance Rate Map (Exhibit 2). On this map, the 100-year floodplain boundary corresponds to the boundary of the areas of

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special flood hazards (Zones A and AE), and the 500-year floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 100- and 500-year floodplain boundaries are close together, only the 100-year floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 100-year floodplain boundary is shown on the Flood Insurance Rate Map (Exhibit 2).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100-year floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. Minimum federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this study were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (Table 2). The computed floodways are shown on the Flood Insurance Rate Map (Exhibit 2). In cases where the floodway and 100-year floodplain boundaries are either close together or collinear, only the floodway boundary is shown. No floodway is provided for the Santa Cruz River since a floodway was not determined in the Flood Insurance Study for the unincorporated areas of Rio Arriba County.

The area between the floodway and 100-year floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood by more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 7.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Santa Fe River								
A	0	287	2,482	4.1	6,267.1	6,267.1	6,267.1	0.0
B	440	250	1,322	7.7	6,267.3	6,267.3	6,267.3	0.0
C	650	180	926	11.0	6,267.3	6,267.3	6,267.7	0.4
D	1,430	220	1,103	9.2	6,273.3	6,273.3	6,273.9	0.6
E	2,400	310	1,118	9.1	6,280.5	6,280.5	6,281.4	0.9
F	3,020	280	995	10.2	6,287.1	6,287.1	6,287.9	0.8
G	4,500	220	1,000	10.2	6,301.7	6,301.7	6,302.6	0.9
H	5,480	220	889	11.4	6,313.1	6,313.1	6,314.0	0.9
I	6,280	324	1,008	10.1	6,322.6	6,322.6	6,323.5	0.9
J	7,240	180	827	12.3	6,336.3	6,336.3	6,336.4	0.1
K	7,840	270	1,253	8.1	6,340.9	6,340.9	6,341.9	1.0
L	8,070	200	863	11.8	6,343.5	6,343.5	6,344.4	0.9
M	8,600	200	799	12.7	6,348.5	6,348.5	6,349.5	1.0
N	9,220	210	886	11.5	6,358.6	6,358.6	6,358.7	0.1
O	10,380	200	858	11.9	6,366.9	6,366.9	6,367.3	0.4
P	11,810	220	884	11.5	6,383.2	6,383.2	6,384.0	0.8
Q	12,530	190	785	13.0	6,394.0	6,394.0	6,394.0	0.0
R	12,760	300	844	12.1	6,397.4	6,397.4	6,398.4	1.0
S	13,820	180	833	12.2	6,414.3	6,414.3	6,414.3	0.0
T	14,710	450	972	10.5	6,422.3	6,422.3	6,422.9	0.6
U	15,080	175	822	12.4	6,427.5	6,427.5	6,427.9	0.4
V	15,680	300	764	13.3	6,432.4	6,432.4	6,432.8	0.4
W	16,450	150	823	12.4	6,444.8	6,444.8	6,444.9	0.1

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[1] Feet above Agua Fria Road

TABLE 2	FEDERAL EMERGENCY MANAGEMENT AGENCY **SANTA FE CO., NM** **(UNINCORPORATED AREAS)**	**FLOODWAY DATA** **SANTA FE RIVER**

15

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Santa Fe River (continued)								
X	17,140	110	455	22.4	6,449.9	6,449.9	6,450.7	0.8
Y	17,510	200	931	10.9	6,462.0	6,462.0	6,462.1	0.1
Z	18,110	180	822	12.4	6,463.6	6,463.6	6,463.9	0.3
AA	18,610	130	746	13.6	6,469.1	6,469.1	6,469.4	0.3
AB	19,910	160	801	12.7	6,483.7	6,483.7	6,484.2	0.5
AC	21,410	180	723	14.1	6,504.0	6,504.0	6,504.1	0.1
AD	22,371	140	760	13.4	6,517.6	6,517.6	6,517.8	0.2
AE	23,181	130	618	16.5	6,526.1	6,526.1	6,526.6	0.5
AF	24,091	110	709	14.3	6,540.1	6,540.1	6,540.1	0.0
AG	24,561	100	662	14.9	6,544.4	6,544.4	6,544.5	0.1
AH	24,651	215	1,207	6.9	6,552.0	6,552.0	6,553.0	1.0
AI	25,521	150	764	13.0	6,556.2	6,556.2	6,556.4	0.2
AJ	26,431	120	673	14.8	6,566.4	6,566.4	6,567.0	0.6
AK	27,351	120	716	13.9	6,578.3	6,578.3	6,578.3	0.0
AL	28,501	110	445	22.4	6,589.4	6,589.4	6,589.4	0.0
AM	28,611	150	770	12.9	6,597.0	6,597.0	6,597.3	0.3
AN	29,371	110	692	14.4	6,605.2	6,605.2	6,605.2	0.0
AO	30,381	130	589	16.9	6,615.8	6,615.8	6,616.0	0.2
AP	31,441	130	700	14.2	6,632.4	6,632.4	6,632.4	0.0
AQ	32,191	150	787	12.7	6,639.6	6,639.6	6,640.1	0.5
AR	32,971	100	672	14.8	6,647.1	6,647.1	6,647.5	0.4
AS	33,861	100	531	18.8	6,655.8	6,655.8	6,656.1	0.2

[1] Feet above Agua Fria Road

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE CO., NM

(UNINCORPORATED AREAS)

FLOODWAY DATA

SANTA FE RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Santa Fe River (continued)								
AT	35,121[1]	120	717	13.9	6,677.4	6,677.4	6,677.4	0.0
AU	36,521[1]	140	698	14.3	6,692.4	6,692.4	6,692.7	0.3
AV	37,391[1]	80	474	21.0	6,706.2	6,706.2	6,706.3	0.1
AW	37,766[1]	80	625	16.0	6,715.3	6,715.3	6,715.4	0.1
AX	38,306[1]	100	586	17.0	6,720.8	6,720.8	6,720.8	0.0
Arroyo Hondo								
A	500[2]	120	1,111	6.0	6,117.3	6,117.3	6,118.2	0.9
B	1,100[2]	64	445	15.1	6,123.0	6,123.0	6,123.0	0.0
C	2,100[2]	100	1,191	5.6	6,133.7	6,133.7	6,134.5	0.8
D	3,360[2]	60	436	15.4	6,141.5	6,141.5	6,141.7	0.2
E	4,320[2]	100	725	9.3	6,151.3	6,151.3	6,152.2	0.9
F	5,420[2]	70	461	14.6	6,165.3	6,165.3	6,166.1	0.8
G	6,415[2]	60	453	14.8	6,179.7	6,179.7	6,179.7	0.0
H	7,445[2]	67	502	13.4	6,191.5	6,191.5	6,192.4	0.9
I	8,445[2]	70	568	11.8	6,201.7	6,201.7	6,202.1	0.4
J	9,425[2]	100	607	11.1	6,209.3	6,209.3	6,210.1	0.8
K	10,390[2]	130	622	10.8	6,219.6	6,219.6	6,219.9	0.3
L	11,390[2]	130	656	10.2	6,230.3	6,230.3	6,231.3	1.0
M	12,390[2]	120	562	11.9	6,242.9	6,242.9	6,243.3	0.4
N	13,240[2]	150	753	8.9	6,252.0	6,252.0	6,253.0	1.0
O	13,425[2]	90	496	13.5	6,255.8	6,255.8	6,256.1	0.3

[1] Feet above Agua Fria Road

[2] Feet above confluence of Arroyo de Los Chamisos

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE CO., NM

(UNINCORPORATED AREAS)

FLOODWAY DATA

SANTA FE RIVER - ARROYO HONDO

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Arroyo Hondo (continued)								
P	13,445	90	500	13.4	6,256.2	6,256.2	6,256.6	0.4
Q	13,495	70	448	15.0	6,257.7	6,257.7	6,258.2	0.5
R	13,749	143	867	7.7	6,261.5	6,261.5	6,261.5	0.0
S	13,819	141	792	8.5	6,261.7	6,261.7	6,261.7	0.0
T	13,844	110	720	9.3	6,261.8	6,261.8	6,261.8	0.0
U	14,494	150	616	10.9	6,266.1	6,266.1	6,266.9	0.8
V	15,304	200	870	7.7	6,274.4	6,274.4	6,275.2	0.8
W	15,404	170	836	8.0	6,276.0	6,276.0	6,276.0	0.0
X	15,459	100	808	8.3	6,278.7	6,278.7	6,278.7	0.0
Y	16,519	150	600	11.2	6,287.4	6,287.4	6,288.2	0.8
Z	17,569	130	695	9.7	6,299.4	6,299.4	6,300.1	0.7
AA	18,569	110	589	11.4	6,308.2	6,308.2	6,309.0	0.8
AB	19,609	130	571	9.6	6,319.8	6,319.8	6,320.8	1.0
AC	20,609	200	653	8.4	6,332.5	6,332.5	6,333.3	0.8
AD	21,569	280	800	6.9	6,343.1	6,343.1	6,344.1	1.0
AE	22,569	195	636	8.6	6,357.0	6,357.0	6,357.8	0.8
AF	23,569	263	636	8.6	6,368.6	6,368.6	6,369.5	0.9
AG	24,569	80	409	13.4	6,384.3	6,384.3	6,384.8	0.5
AH	25,319	100	452	12.2	6,397.4	6,397.4	6,397.7	0.3
AI	26,494	70	402	13.7	6,415.0	6,415.0	6,415.2	0.2
AJ	27,574	140	532	10.3	6,428.4	6,428.4	6,428.9	0.5
AK	28,574	70	342	16.1	6,446.6	6,446.6	6,447.5	0.9

[1] Feet above confluence of Arroyo de Los Chamisos

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE CO., NM
(UNINCORPORATED AREAS)

FLOODWAY DATA

ARROYO HONDO

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Arroyo Hondo (continued)								
AL	29,324	70	402	13.7	6,463.5	6,463.5	6,463.8	0.3
AM	29,794	110	485	11.3	6,470.0	6,470.0	6,470.2	0.2
AN	30,434	110	414	13.3	6,479.7	6,479.7	6,480.3	0.6
AO	31,289	170	637	8.6	6,493.8	6,493.8	6,494.3	0.5
AP	32,504	110	464	11.9	6,508.8	6,508.8	6,508.9	0.1
AQ	33,529	70	408	13.5	6,523.2	6,523.2	6,523.3	0.1
AR	34,579	642	620	8.9	6,538.8	6,538.8	6,539.8	1.0
AS	35,449	240	573	9.6	6,555.7	6,555.7	6,556.0	0.3
AT	36,449	140	494	11.1	6,574.6	6,574.6	6,575.2	0.6
AU	37,449	100	452	12.2	6,591.5	6,591.5	6,591.8	0.3
AV	38,134	130	497	11.1	6,601.6	6,601.6	6,602.1	0.5
AW	38,484	150	538	10.2	6,606.7	6,606.7	6,607.3	0.6
AX	39,484	210	558	9.9	6,623.0	6,623.0	6,623.6	0.6
AY	40,504	140	497	11.1	6,640.9	6,640.9	6,641.2	0.3
AZ	41,504	200	565	9.7	6,658.9	6,658.9	6,659.5	0.6
BA	42,504	150	506	10.9	6,677.4	6,677.4	6,677.6	0.2
BB	43,504	200	606	9.1	6,694.8	6,694.8	6,695.5	0.7
BC	44,514	170	520	10.6	6,711.2	6,711.2	6,711.4	0.2
BD	45,584	140	507	10.9	6,729.6	6,729.6	6,730.1	0.5
BE	46,509	230	617	8.9	6,744.0	6,744.0	6,744.4	0.4
BF	47,479	190	484	11.4	6,760.4	6,760.4	6,760.6	0.2
BG	48,609	220	695	7.9	6,777.3	6,777.3	6,777.9	0.6

[1] Feet above confluence of Arroyo de Los Chamisos

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE CO., NM
(UNINCORPORATED AREAS)

FLOODWAY DATA

ARROYO HONDO

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Arroyo Hondo (continued)								
BH	49,089[1]	79	417	13.2	6,786.0	6,786.0	6,786.0	0.0
BI	49,109[1]	85	518	10.6	6,787.5	6,787.5	6,787.5	0.0
BJ	49,129[1]	84	502	11.0	6,787.8	6,787.8	6,787.8	0.0
BK	49,469[1]	110	649	8.5	6,791.1	6,791.1	6,791.6	0.5
BL	49,829[1]	120	510	10.8	6,795.7	6,795.7	6,796.3	0.6
BM	50,629[1]	160	637	8.6	6,805.2	6,805.2	6,806.2	1.0
Arroyo de Los Chamisos								
A	550[2]	140	1,420	5.0	6,115.6	6,115.6	6,115.6	0.0
B	1,765[2]	133	784	9.0	6,118.2	6,118.2	6,118.2	0.0
C	2,175[2]	541	4,114	1.7	6,130.0	6,130.0	6,130.0	0.0
D	2,575[2]	143	641	11.1	6,130.0	6,130.0	6,130.0	0.0
E	3,575[2]	78	627	11.3	6,138.8	6,138.8	6,138.9	0.1
F	4,575[2]	100	560	12.6	6,145.4	6,145.4	6,145.6	0.2
G	5,575[2]	100	630	11.2	6,153.9	6,153.9	6,154.5	0.6
H	6,365[2]	120	639	11.1	6,159.6	6,159.6	6,160.4	0.8
I	6,575[2]	180	703	10.1	6,162.1	6,162.1	6,162.8	0.7
J	7,575[2]	75	487	14.5	6,172.4	6,172.4	6,173.3	0.9
K	8,405[2]	67	488	14.5	6,182.0	6,182.0	6,182.2	0.1
L	9,405[2]	88	577	12.3	6,191.5	6,191.5	6,192.4	0.9
M	10,405[2]	70	477	14.9	6,203.6	6,203.6	6,203.8	0.2

[1] Feet above confluence of Arroyo de Los Chamisos
[2] Feet above confluence with Arroyo Hondo

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE CO., NM

(UNINCORPORATED AREAS)

FLOODWAY DATA

ARROYO HONDO - ARROYO DE LOS CHAMISOS

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Arroyo de Los Chamisos (continued)								
N	11,405	70	527	13.4	6,212.9	6,212.9	6,213.2	0.3
O	12,405	60	471	15.0	6,223.5	6,223.5	6,223.9	0.4
P	13,405	130	873	8.1	6,231.8	6,231.8	6,232.8	1.0
Q	14,205	110	573	12.3	6,239.8	6,239.8	6,240.4	0.6
R	15,205	120	602	11.8	6,251.1	6,251.1	6,251.3	0.2
S	16,105	120	622	11.4	6,260.6	6,260.6	6,261.0	0.4
T	16,705	213	788	9.0	6,266.0	6,266.0	6,266.8	0.8
U	17,205	250	1,016	7.0	6,269.5	6,269.5	6,270.5	1.0
V	17,705	85	507	14.0	6,277.4	6,277.4	6,277.4	0.0
W	18,205	130	730	9.7	6,281.3	6,281.3	6,282.2	0.9
X	19,205	110	586	12.1	6,290.7	6,290.7	6,290.9	0.2
Y	20,205	125	652	10.9	6,299.8	6,299.8	6,300.2	0.4
Z	21,205	160	661	10.7	6,310.3	6,310.3	6,310.5	0.2
AA	21,705	220	932	7.6	6,314.6	6,314.6	6,315.5	0.9
AB	22,205	126	612	11.6	6,322.1	6,322.1	6,322.1	0.0
AC	23,205	90	535	13.2	6,334.1	6,334.1	6,334.1	0.0
AD	24,205	150	766	9.2	6,342.8	6,342.8	6,343.4	0.6
AE	25,205	130	619	11.4	6,353.5	6,353.5	6,353.8	0.3
AF	26,205	115	579	12.2	6,364.7	6,364.7	6,364.7	0.0
AG	27,205	140	647	10.9	6,375.1	6,375.1	6,375.4	0.3
AH	28,205	381	955	7.4	6,385.1	6,385.1	6,386.1	1.0

[1] Feet above confluence with Arroyo Hondo

TABLE 2	FEDERAL EMERGENCY MANAGEMENT AGENCY **SANTA FE CO., NM** **(UNINCORPORATED AREAS)**	**FLOODWAY DATA** **ARROYO DE LOS CHAMISOS**

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE
Arroyo de Los Chamisos (continued)								
AI	28,815	146	1,666	3.6	6,400.8	6,400.8	6,401.2	0.4
AJ	28,865	150	1,572	3.8	6,400.8	6,400.8	6,401.2	0.4
AK	29,320	150	951	6.4	6,400.9	6,400.9	6,401.2	0.3
AL	30,370	150	549	11.0	6,410.2	6,410.2	6,410.3	0.1
AM	31,460	150	549	11.0	6,422.9	6,422.9	6,422.9	0.0
AN	32,430	150	595	10.2	6,435.1	6,435.1	6,435.8	0.7
AO	33,430	150	560	10.8	6,447.5	6,447.5	6,447.5	0.0
AP	33,980	285	759	8.0	6,453.7	6,453.7	6,454.2	0.5
AQ	34,480	299	771	7.8	6,459.6	6,459.6	6,460.6	1.0
AR	35,480	150	555	10.9	6,471.9	6,471.9	6,472.6	0.7
AS	35,710	149	551	11.0	6,475.1	6,475.1	6,475.5	0.4
AT	35,910	150	552	11.0	6,477.6	6,477.6	6,478.0	0.4
AU	35,960	150	765	7.9	6,480.3	6,480.3	6,480.3	0.0
AV	36,060	150	631	9.6	6,480.4	6,480.4	6,480.5	0.1
AW	36,490	150	551	11.0	6,485.1	6,485.1	6,485.9	0.8
AX	37,490	150	548	11.0	6,499.1	6,499.1	6,499.7	0.6
AY	38,590	134	561	10.8	6,512.1	6,512.1	6,512.3	0.2
AZ	39,490	150	572	10.6	6,522.6	6,522.6	6,522.6	0.0
BA	40,490	150	602	10.0	6,540.4	6,540.4	6,541.0	0.6
BB	41,465	88	462	13.1	6,552.4	6,552.4	6,552.4	0.0

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[1] Feet above confluence with Arroyo Hondo

TABLE 2

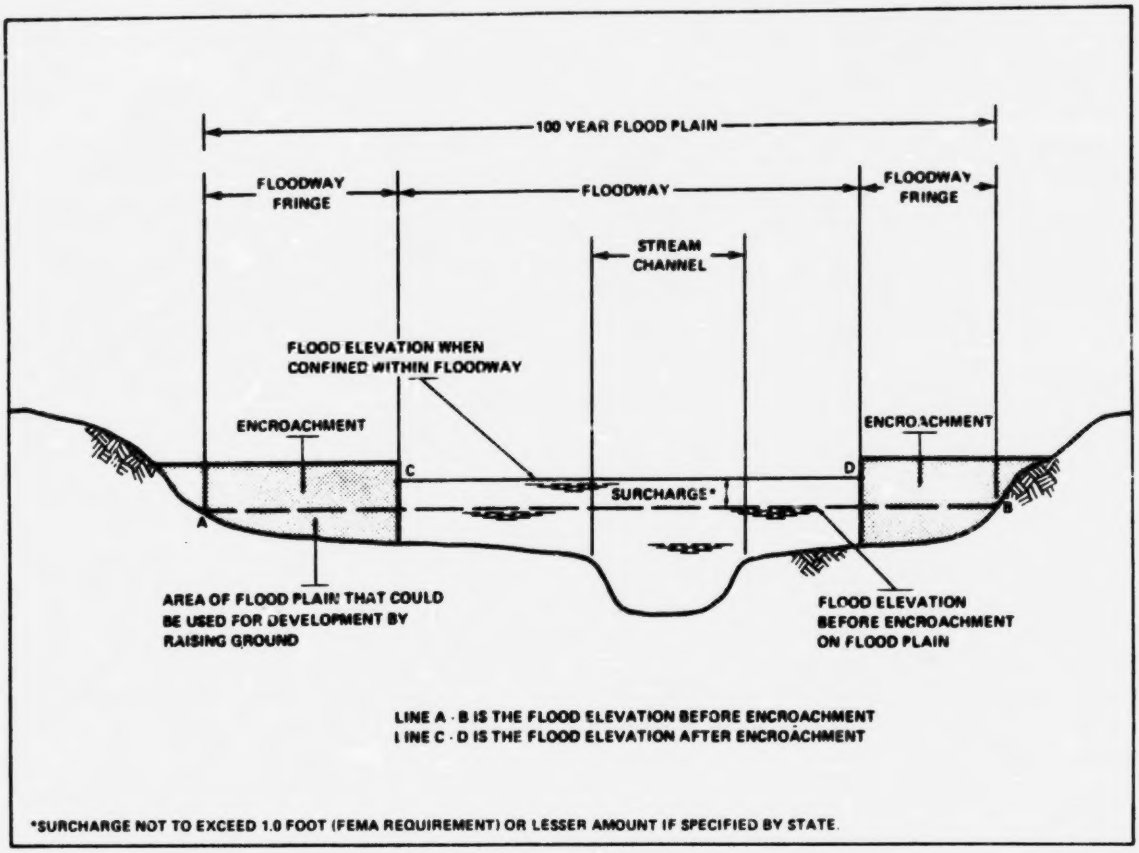
FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE CO., NM

(UNINCORPORATED AREAS)

FLOODWAY DATA

ARROYO DE LOS CHAMISOS



100 YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE*
A
B
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN
LINE A - B IS THE FLOOD ELEVATION BEFORE ENCROACHMENT
LINE C - D IS THE FLOOD ELEVATION AFTER ENCROACHMENT
*SURCHARGE NOT TO EXCEED 1.0 FOOT (FEMA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

FLOODWAY SCHEMATIC Figure 7

5.0 INSURANCE APPLICATION

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by approxi-mate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

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Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by detailed methods. In most instances, whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the areas of 100-year shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AO

Zone AO is the flood insurance rate zone that corresponds to the areas of 100-year shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within this zone.

Zone A99

Zone A99 is the flood insurance rate zone that corresponds to areas of the 100-year floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or depths are shown within this zone.

Zone V

Zone V is the flood insurance rate zone that corresponds to the 100-year coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no base flood elevations are shown within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 100-year coastal floodplains that have additional hazards associated with storm waves. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 500-year floodplain, areas within the 500-year floodplain, and to areas of 100-year flooding where average depths are less than 1 foot, areas of 100-year flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

Zone D

Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

6.0 FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 100-year floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 100- and 500-year floodplains. Floodways and the locations of selected cross sections used in the hydraulic analyses and floodway computations are shown where applicable.

7.0 OTHER STUDIES

The COE has published two studies that cover areas in this study: Design Memorandum No. 1 - Hydrology - Santa Fe River and Arroyo Mascaras, Santa Fe, New Mexico (Reference 1); and Floodplain Information-Arroyo de los Chamisos and Arroyo Hondo (Reference 9). The results of this study are in general agreement with the results of those studies in terms of the floodplains and profiles. Minor differences in the magnitude of the frequency flows exist due to the more recent hydrologic analyses used in this study. Furthermore, some elevation differences can be found in the streambed elevations; these are due to mining and channelization of the arroyos and natural meandering of the channel.

Flood Insurance Studies have been prepared for the Cities of Espanola and Santa Fe, and the unincorporated areas of Bernalillo County (References 10, 11, and 12). Minor differences exist between this study and the

Santa Fe study due to the more recent hydrology used in this study. The results of this study are in complete agreement with the results of the remaining studies.

A Flood Insurance Study is currently being prepared for the unincorporated areas of Rio Arriba County (Reference 2). The results of that study will be in complete agreement with the results of this study.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting FEMA, the Natural and Technological Hazards Division, Federal Regional Center, 800 North Loop 288, Denton, Texas 76201.

9.0 BIBLIOGRAPHY AND REFERENCES

1. U. S. Army Corps of Engineers, Albuquerque District, Design Memorandum No. 1 - Hydrology - Santa Fe River and Arroyo Mascaras, Santa Fe, New Mexico, Albuquerque, New Mexico, September 1979.

.2 Federal Emergency Management Agency, Flood Insurance Study, Unincorproated Areas of Rio Arriba County, New Mexico (Unpublished).

3. U. S. Department of the Interior, Geological Survey, Office of Water Data Collection, Interagency Advisory Committee on Water Data, "Guidelines for Determining Flood Flow Frequency," Bulletin 17B, Reston, Virginia, Revised 1982.

4. Bohannan-Huston Inc. of Albuquerque, New Mexico, for Sangre del Cristo Water Company of Santa Fe, New Mexico, Topographic Maps compiled from aerial photographs, Scale 1:2,400, Contour Interval 2 Feet: Santa Fe County, New Mexico, 1981.

5. U. S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water Surface Profiles, Generalized Computer Program, Davis, California, November 1976 with updates.

6. U. S. Department of the Interior, Geological Survey, WSPRO, Step-Backwater Computer Program.

7. U. S. Department of the Interior, Geological Survey, 7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 20 Feet: Turquoise Hill, New Mexico, 1977; Auga Fria, New Mexico, 1977; Seton Village, New Mexico, 1977; Espanola, New Mexioc, 1977; Cundiyo, New Mexico, 1977; Chimayo, New Mexico, 1977.

8. U. S. Department of Housing and Urban Development, Federal Insurance Administration, *Flood Hazard Boundary Map, Unincorporated Areas of Santa Fe County, New Mexico*, December 20, 1977.

9. U. S. Army Corps of Engineers, *Floodplain Information-Arroyo de los Chamisos and Arroyo Hondo*, Albuquerque, New Mexico, December 1967.

10. Federal Emergency Management Agency, *Flood Insurance Study, City of Espanola, Santa Fe County, New Mexico*, Washington, D. C., February 19, 1986.

11. Federal Emergency Management Agency, Federal Insurance Administration, *Flood Insurance Study, City of Santa Fe, Santa Fe County, New Mexico*, July 2, 1980.

12. Federal Emergency Management Agency, *Flood Insurance Study, Unincorporated Areas of Bernalillo County, New Mexico*, Washington, D. C., September 15, 1983.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 1	164	6,651.78	Aluminum cap embedded in concrete monument stamped BH-38 LS 2455 1983 set for survey of Richards Road approximately 700 feet west and 3,100 feet north of southeast corner of Section 32, T17N, R9#, N.M.P.M., Santa Fe County, New Mexico.
RM 2	164	6,682.29	Chiseled cross on west bonnet bolt of fire hydrant at southwest corner of intersection of Agua Fria Road and Siler Road.
RM 3	168	6,715.02	Chiseled cross on west bonnet bolt of fire hydrant No. 328 at southwest corner of intersection of Agua Fria Road and Maez Road.
RM 4	168	6,733.47	Chiseled cross on north bonnet bolt of fire hydrant located approximately 50 feet south of Agua Fria Road and 1,000 feet east of Maez Road.
RM 5	226	6,261.34	60d common spike at north side of existing power pole. Power pole is located at northwest corner of intersection of dirt road and the Santa Fe River, approximately 500 feet west and 1,900 feet north of southeast corner of Section 9, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 6	226	6,275.05	Chiseled square on top of north end of concrete headwall located on west boundary of sewage treatment plant located approximately 450 feet east and 2,350 feet north of southwest corner of Section 10, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 7	226	6,295.11	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,700 feet east and 1,350 feet south of northwest corner of Section 10, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 8	226	6,320.33	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,150 feet west and 300 feet north of southeast corner of Section 3, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 9	226	6,341.85	60d common spike at north side of existing power pole, spike is flush with ground. Power pole is located approximately 200 feet west and 450 feet north of southeast corner of Section 3, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 10	226	6,368.14	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,900 feet east and 4,600 feet south of northwest corner of Section 2, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 11	226	6,394.16	U.S.G.L.O. brass cap (0.40 foot above ground) on corner No. 2 of Private Claim 3173, on Section line common to Sections 2 and 11, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 12	226	6,432.35	U.S.G.L.O. brass cap (0.8 foot above ground) on corner No.3 of Private Claim 1220, and within Section 1, T16N, R8E, N.MP.M., Santa Fe County, New Mexico.
RM 13	227	6,488.61	Chiseled cross on north bonnet bolt of fire hydrant located approximately 50 feet south of State Route 22, 20 feet west of existing paved road, and 100 feet south of street address County Route 6, Box 36, and located approximately 500 feet west and 1,800 feet south of northeast corner of Section 1, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 14	227	6,542.40	60d common spike at north side of existing power pole, approximately 30 feet south of State Route 22 and across from south of State Route 22 and 20 feet west of street address County Route 6, Box 27B.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 15	227	6,542.40	60d common spike at north side of existing power pole, approximately 30 feet south of State Route 22 and across from southeast corner of Lone Star Trailer Ranch.
RM 16	227	6,567.75	60d common spike at south side of existing power pole, approximately 30 feet north of State Route 22 and 150 feet east of street adress County Route 6, Box 15.
RM 17	227	6,599.76	60d common spike flush with ground at north guard post for sign "Iglesia De San Isidro Church."
RM 18	227	6,631.66	60d common spike at north side of existing power pole, spike is flush with ground approximately 30 feet south of State Route 22 at street address County Route 6, Box 116.
RM 19	227	6,481.06	Chiseled square on top of southeast corner of existing concrete box culvert that runs under paved road running in east-west direction and located on Arroyo de Los Chamisos and the Car Park, located in southeast 1/4 of Section 7, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 20	227	6,512.96	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,400 feet east and 1,850 feet south of northwest corner of Section 8, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 21	227	6,529.88	60d common spike at south side of existing power pole located approximately 2,250 feet east and 1,550 feet south of northwest of Section 8, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 22	227	6,560.71	Chiseled square on top of south edge of existing sidewalk located approximately 4.3 feet east of southeast corner of existing concrete box culvert located at Rodeo Road and Arroyo de Los Chamisos located at northwest quarter of Section 8, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 23	228	6,160.48	Aluminum cap found in Section corner common to Section 21, 22, 27, and 28, T16N, R8E, N.M.P.M.
RM 24	228	6,180.71	5/8-inch rebar, 18 inches length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,700 feet east and 2,550 feet south of northwest corner of Section 22, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 25	228	6,199.05	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,500 feet east and 1,100 feet south of northwest corner of Section 22, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 26	228	6,216.60	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,400 feet west and 300 feet north of southeast corner of Section 15, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 27	228	6,236.53	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 100 feet east and 1,100 feet north of southwest corner of Section 14, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 28	228	6,252.38	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,500 feet east and 2,100 feet north of southwest corner of Section 14, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 29	228	6,263.36	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,400 feet east and 2,400 feet north of southwest corner of Section 14, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 30	228	6,281.72	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,700 feet west and 1,250 feet north of southeast corner of projected Section 14, T16N, R8E, N.M.P.M., within Pacheco Grant, Santa Fe County, New Mexico.
RM 31	228	6,304.32	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 50 feet west and 650 feet north of southwest corner of Section 13, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 32	228	6,187.20	60d common spike in northwest side of existing power pole. Power pole is located approximately 1,650 feet west and 100 feet south of norhteast corner of Section 27, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 33	228	6,215.89	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 700 feet east and 700 feet north of southwest corner of Section 23, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 34	228	6,240.43	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,200 feet east and 300 feet north of southwest corner of Section 23, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 35	228	6,262.79	N.M.A.H.C. brass cap stamped 6252.77 at northwest corner of bridge or west Frontage Road of Interstate Route 25.
RM 36	229	6,322.62	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,250 feet east and 550 feet north of southwest corner of Section 13, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 37	229	6,347.07	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,200 feet west and 1,650 feet north of southeast corner of Section 13, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 38	229	6,375.73	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 600 feet west and 2,500 feet north of southeast corner of Section 13, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 39	229	6,398.11	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,950 feet east and 2,150 feet north of southwest corner of Section 18, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 40	229	6,415.15	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,350 feet west and 2,350 feet north of southeast corner of Section 18, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 41	229	6,436.52	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,300 feet west and 1,300 feet south of northeast corner of Section 18, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 42	229	6,462.65	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,450 feet west and 550 feet north of southeast corner of Section 7, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 43	229	6,343.45	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 800 feet west and 450 feet north of southeast corner of Section 24, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 44	229	6,384.77	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,700 feet east and 2,100 feet north of southwest corner of Section 19, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 45	229	6,452.77	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 4,500 feet east and 4,400 feet north of southwest corner of Section 19, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 46	229	6,468.35	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 5,150 feet west and 700 feet south of northeast corner of Section 20, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 47	229	6,507.78	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,800 feet west and 200 feet north of southeast corner of Section 17, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 48	229	6,557.28	60d common spike in north side of existing power pole. Power pole is located approximately 50 feet west and 650 feet north of southeast corner of Section 17, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 49	229	6,596.10	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,050 feet east and 850 feet north of southwest corner of Section 16, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 50	233	6,623.03	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 2,100 feet west and 3,300 feet south of northeast corner of Section 16, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 51	233	6,657.897	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 600 feet west and 2,500 feet south of northeast corner of Section 16, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico, and approximately 60 feet northwest of flowline of Arroyo Hondo.
RM 52	233	6,711.01	60d common spike in existing fence post. Fence post is located approximately 3,100 feet west and 2,200 feet south of northeast corner of Section 15, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 53	233	6,760.59	60d common spike in north side of existing power pole. Power pole is located approximately 400 feet west and 1,700 feet south of northeast corner of Section 15, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 54	233	6,803.84	USGS Bench Mark at northeast corner of existing railroad bridge, nail with washer stamped USGS BM, located approximately 700 feet east and 700 feet south of northwest corner of Section 14, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 55	233	6,803.47	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 1,950 feet east and 600 feet south of northwest corner of Section 14, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.
RM 56	236	6,124.12	60d common spike in east side of existing power pole. Power pole is located approximately 1,600 feet west and 2,150 feet south of northeast corner of Section 28, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 57	236	6,126.08	Chiseled square on center of south end of concrete pad over existing concrete/metal culverts approximately 1,100 feet west and 1,700 feet south of northeast corner of Section 28, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico, and at centerline of Arroyo de Los Chamisos.
RM 58	236	6,155.25	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 995 feet east and 950 feet south of northwest corner of Section 27, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.

EXHIBIT 3 - ELEVATION REFERENCE MARKS

Reference Mark	FIRM Panel	Elevation (Feet NGVD)	Description of Location
RM 59	236	6,132.48	5/8-inch rebar, 18 inches in length with 1.25-inch diameter red plastic survey cap stamped WEAVER LS 6544, approximately 500 feet west and 2,000 feet south of northeast corner of Section 28, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 60	236	6,281.85	Chiseled square on top of existing concrete headwall in southeast corner of concrete box culvert running under State Route 14 located approximately 4,900 feet west and 1,050 feet south of northeast corner of Section 25, T16N, R8E, N.M.P.M., Santa Fe County, New Mexico.
RM 61	237	6,312.59	60d common spike in south side of existing power pole. Power pole is located approximately 2,500 feet west and 1,400 feet south of northeast corner of Section 25, T16N, R9E, N.M.P.M., Santa Fe County, New Mexico.

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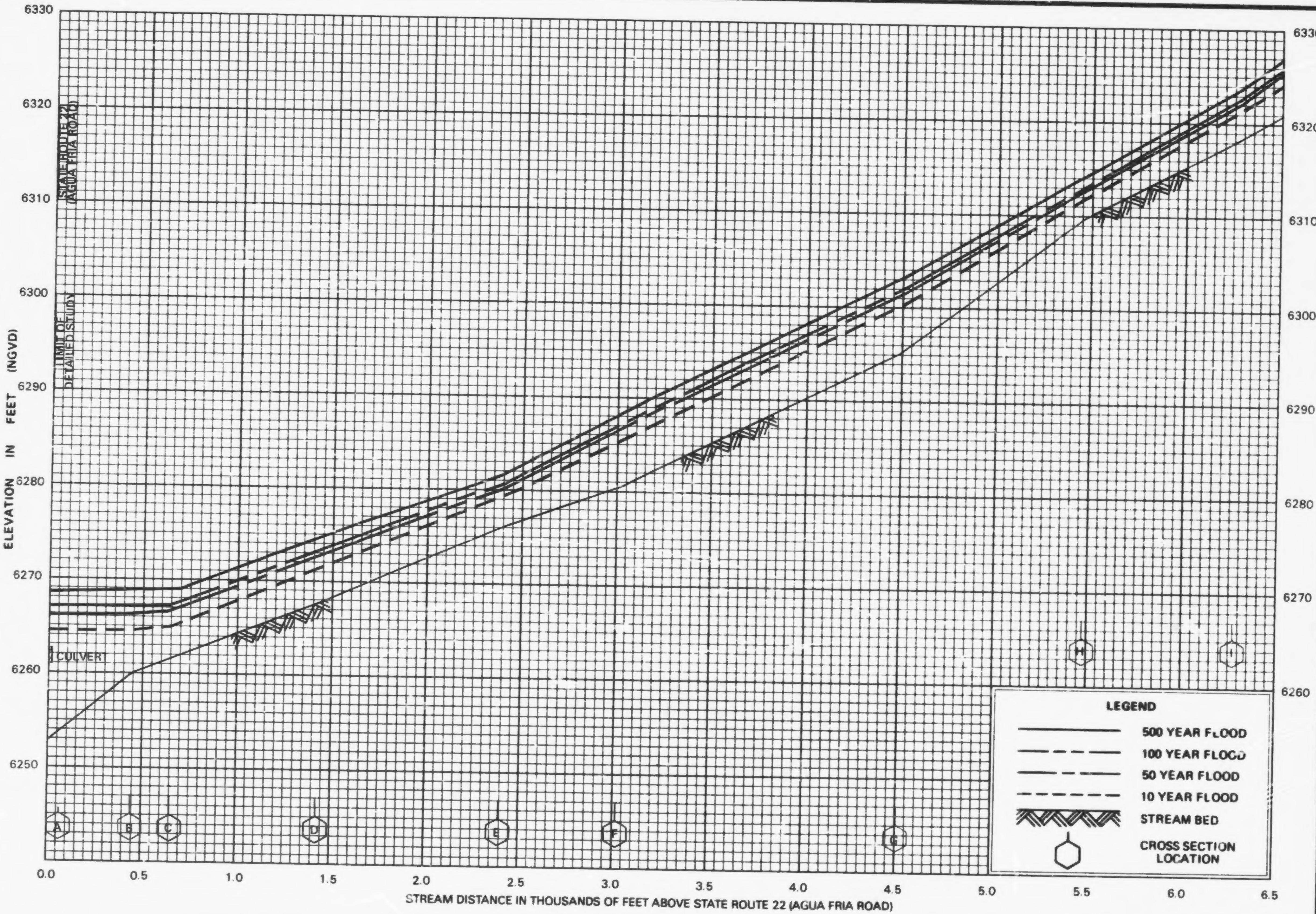

FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

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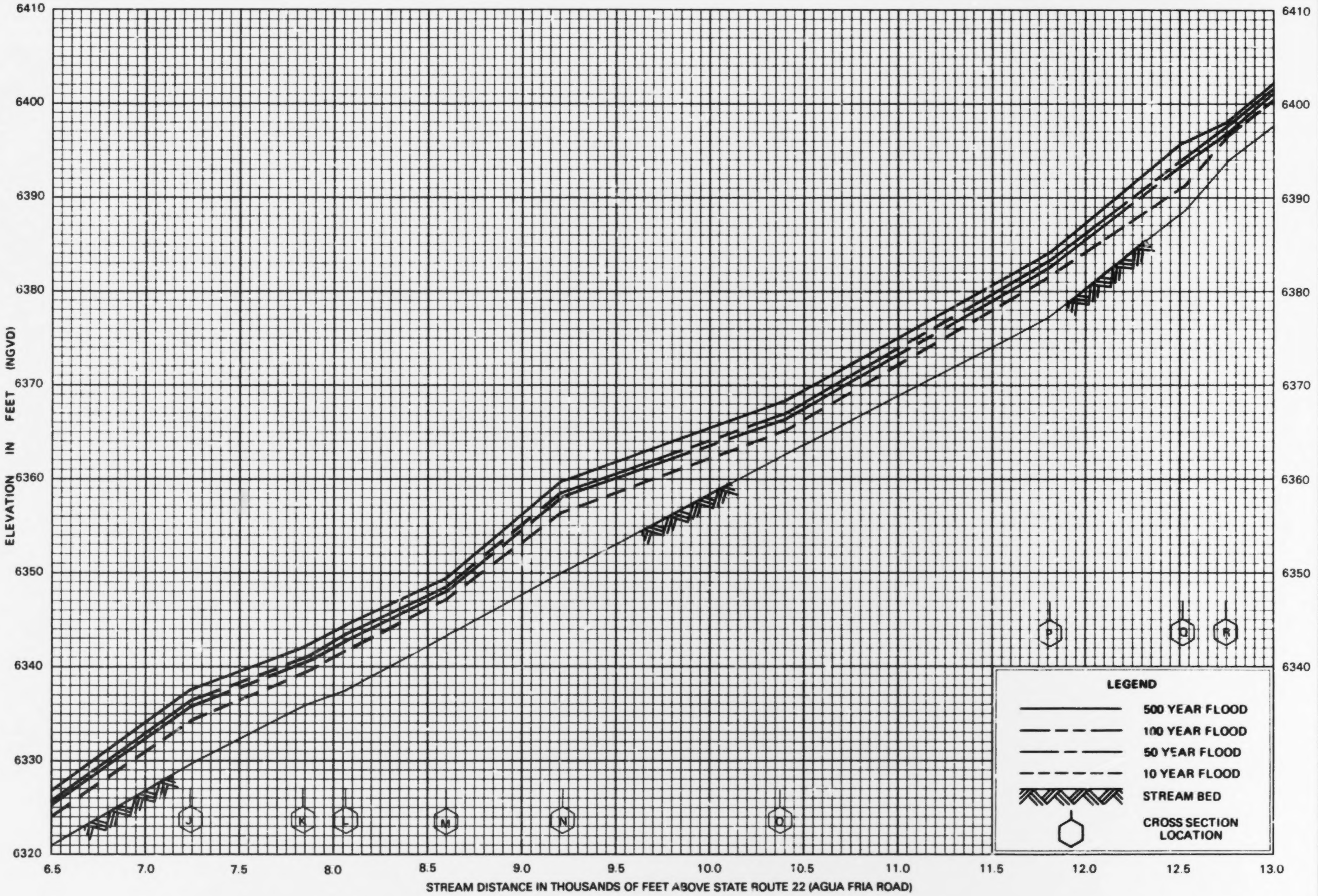

FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

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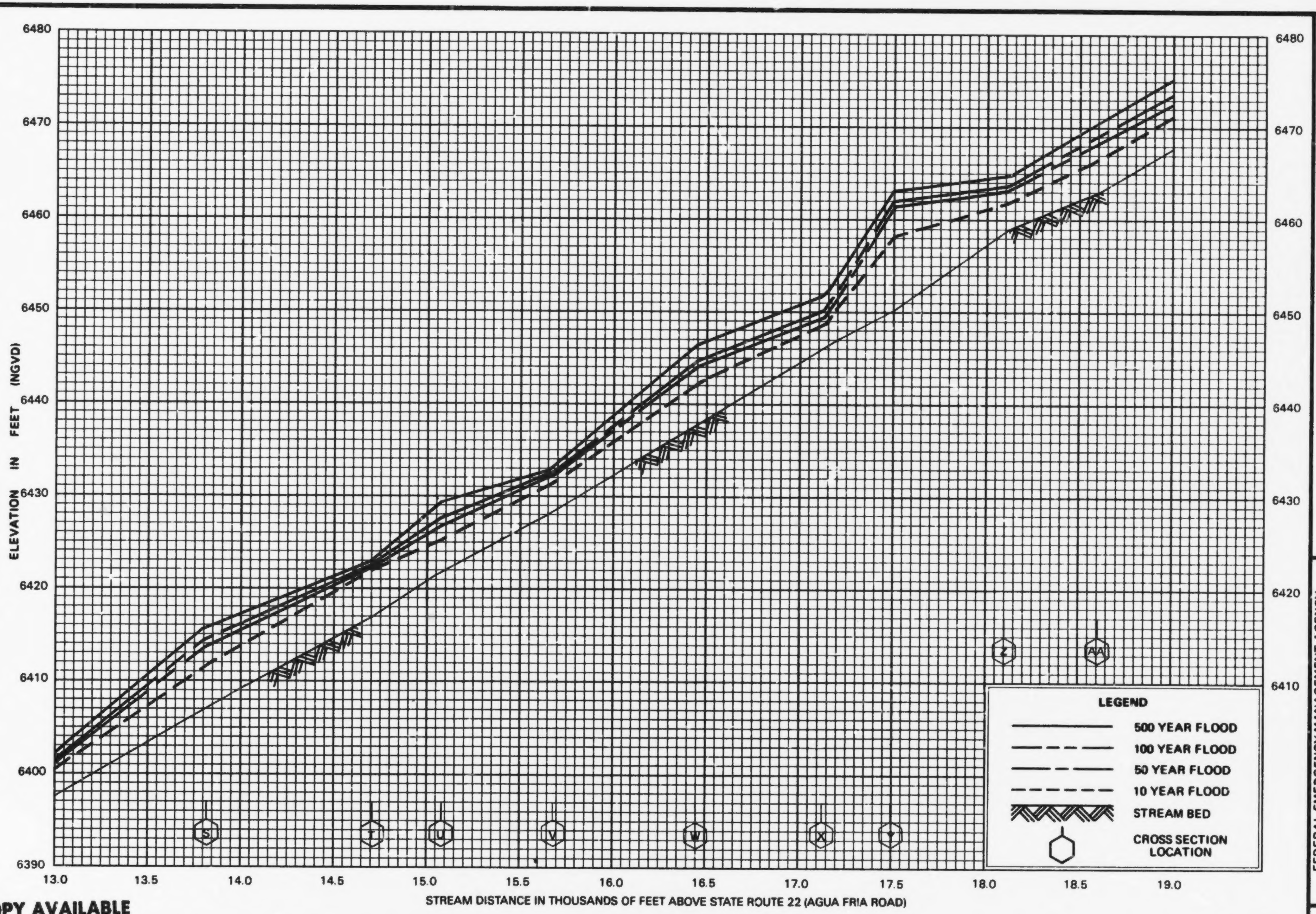

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FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
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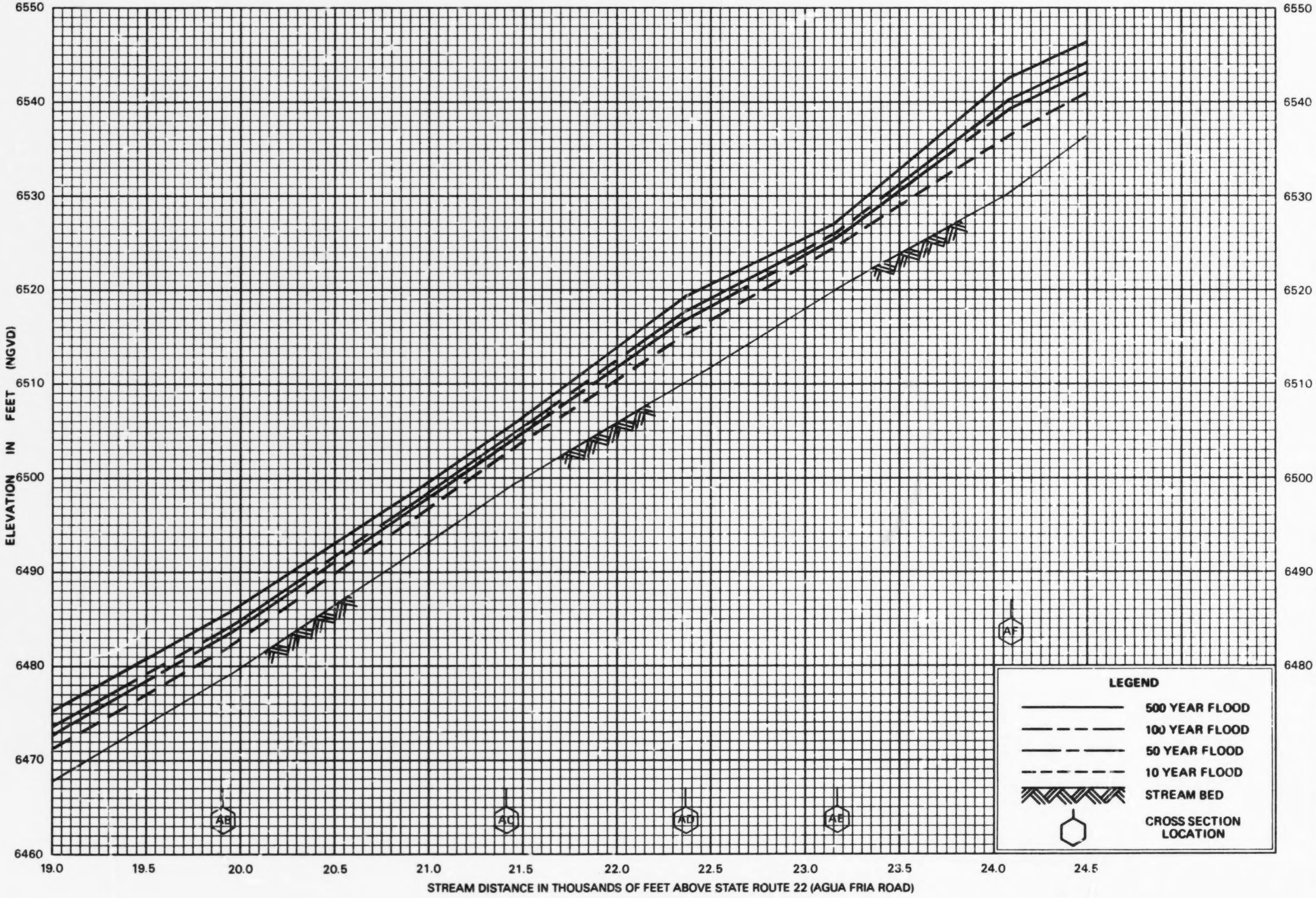

FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

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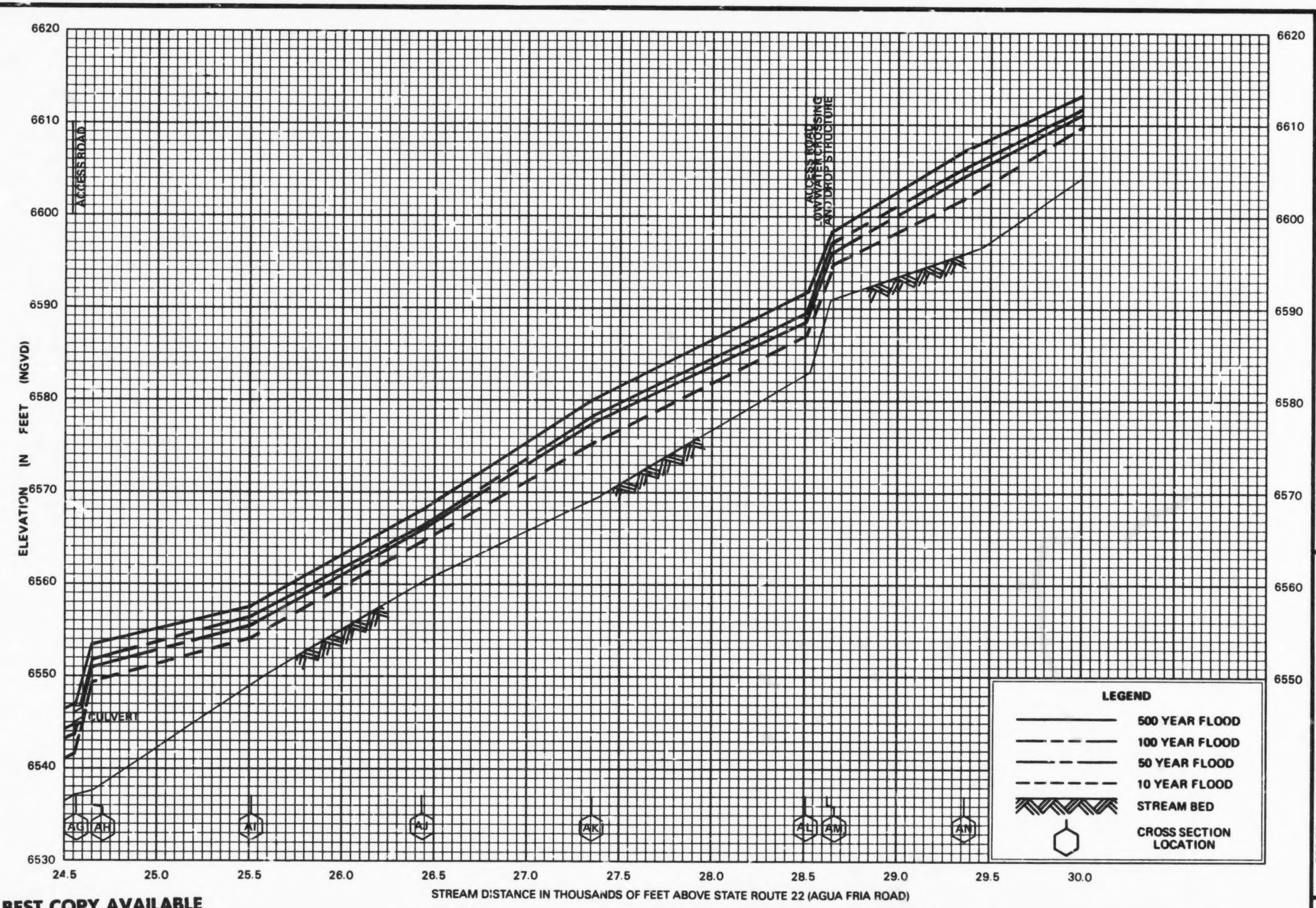

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FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

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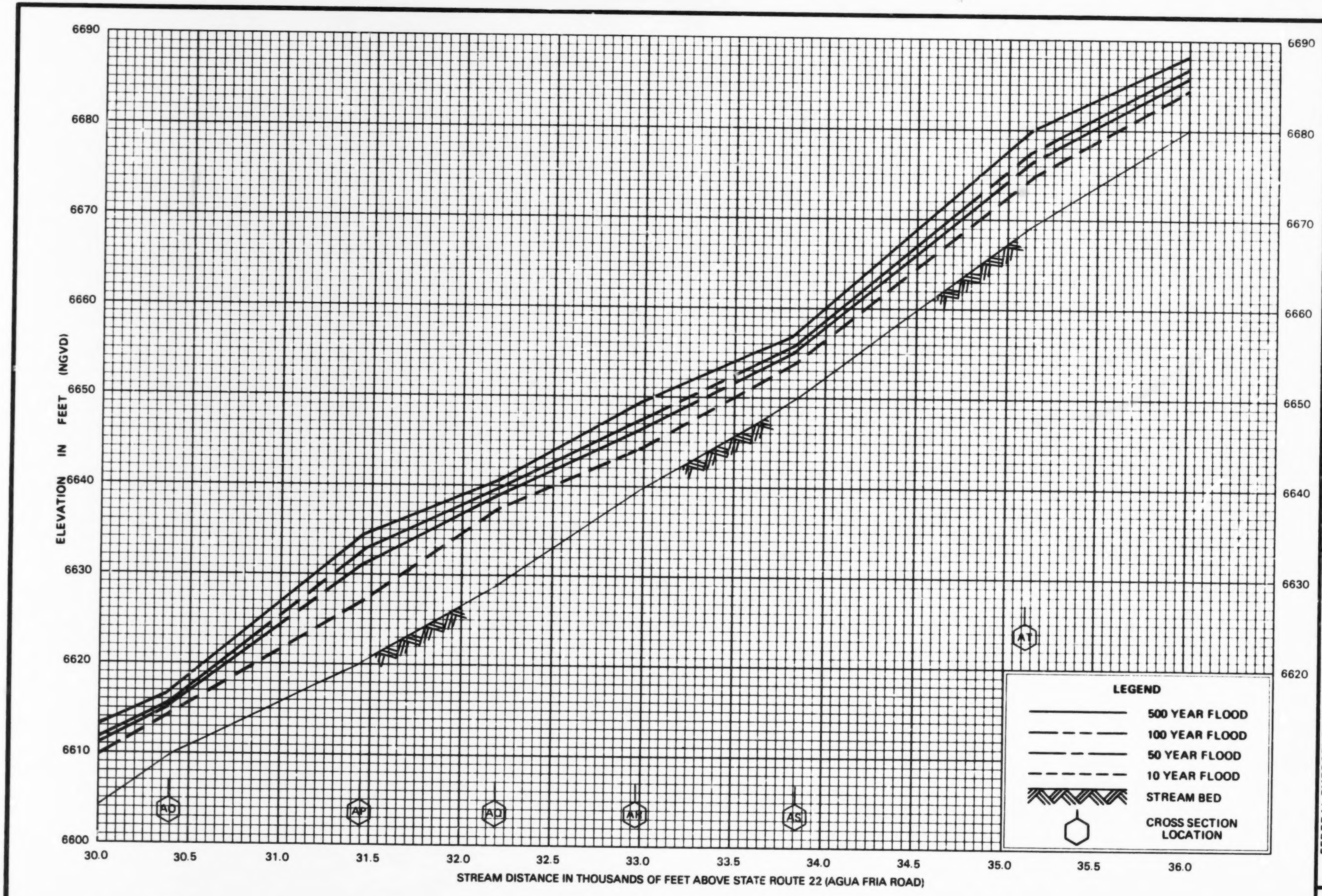

FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

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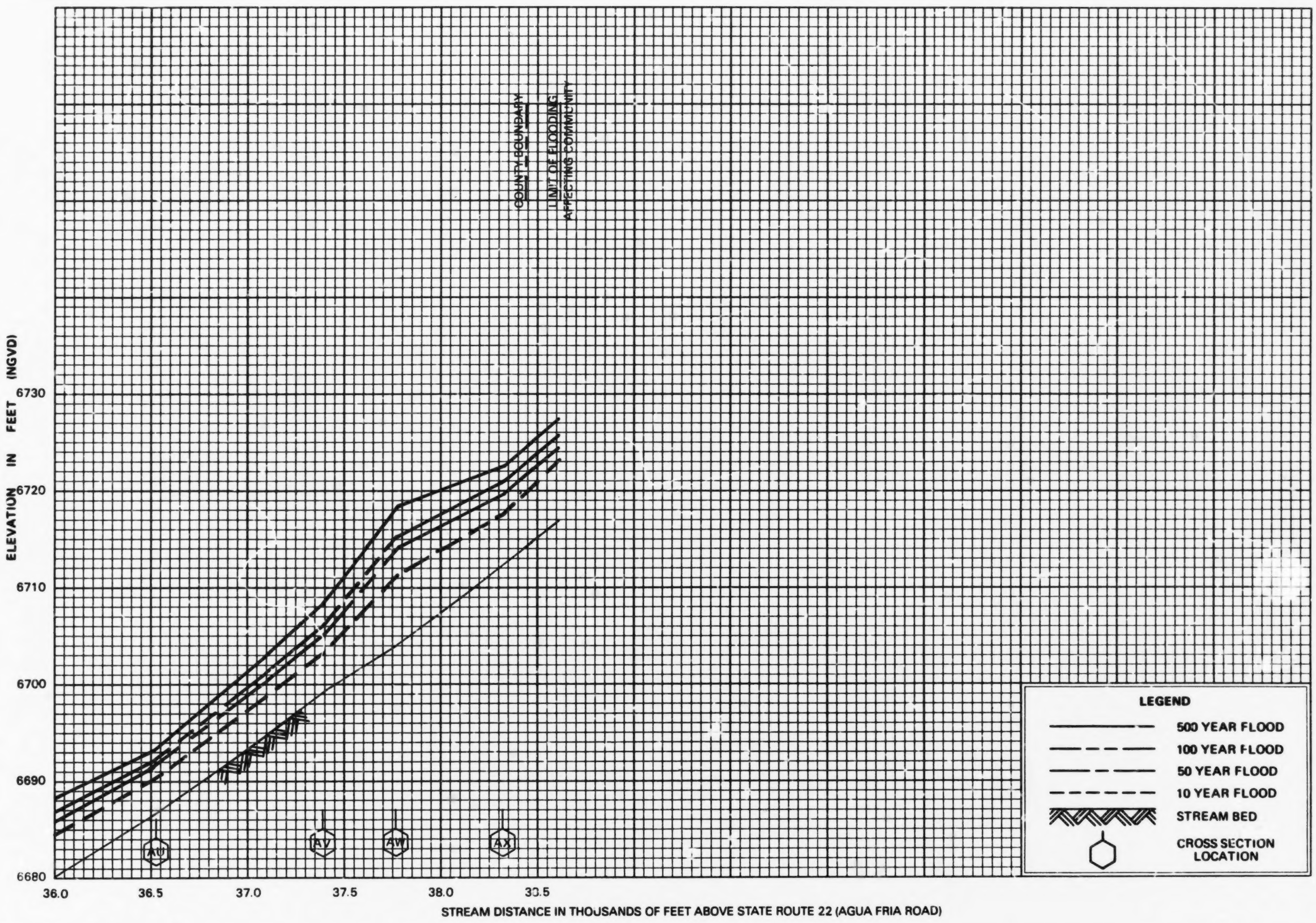

FLOOD PROFILES

SANTA FE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

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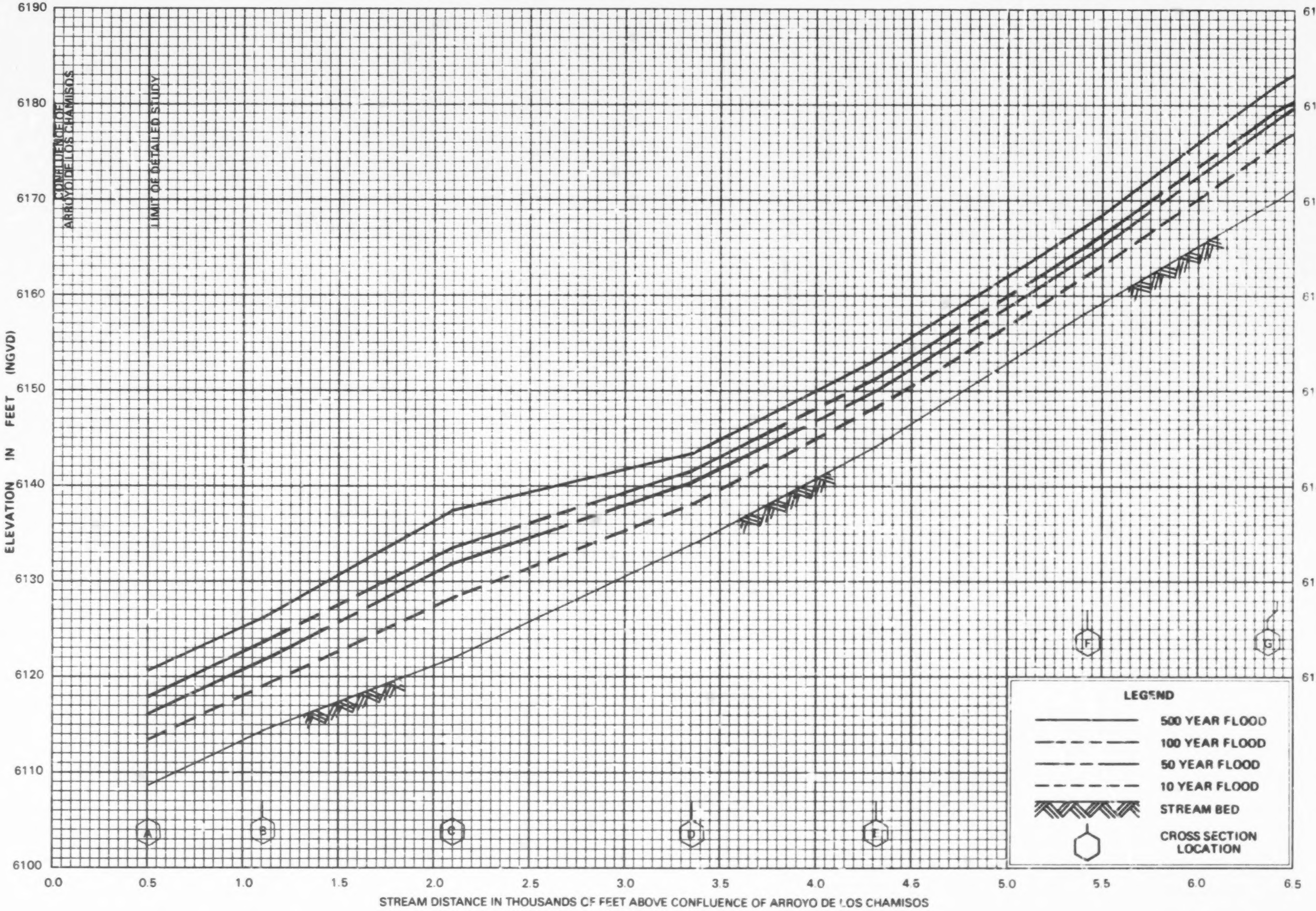

FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

08P

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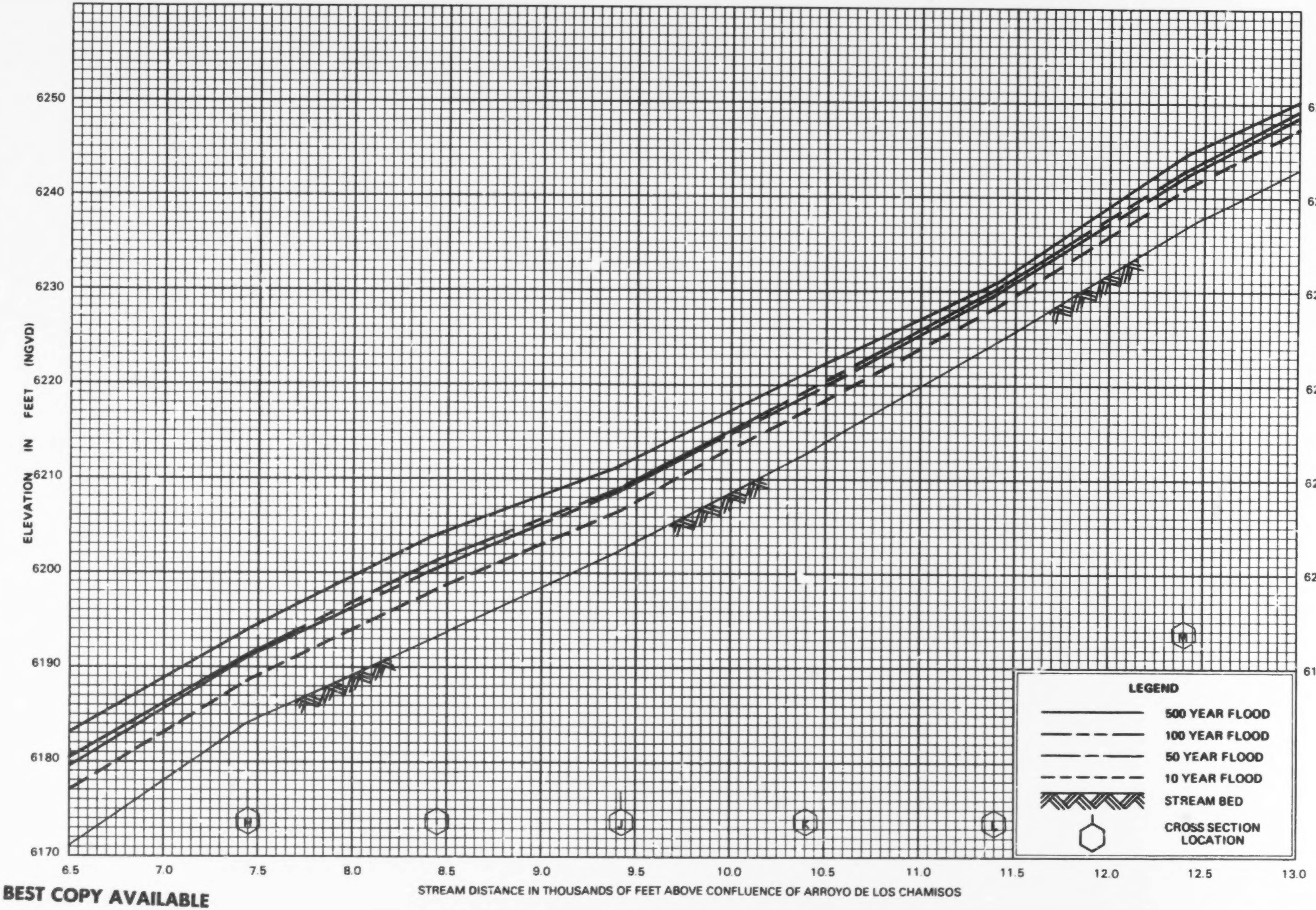

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FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

09P

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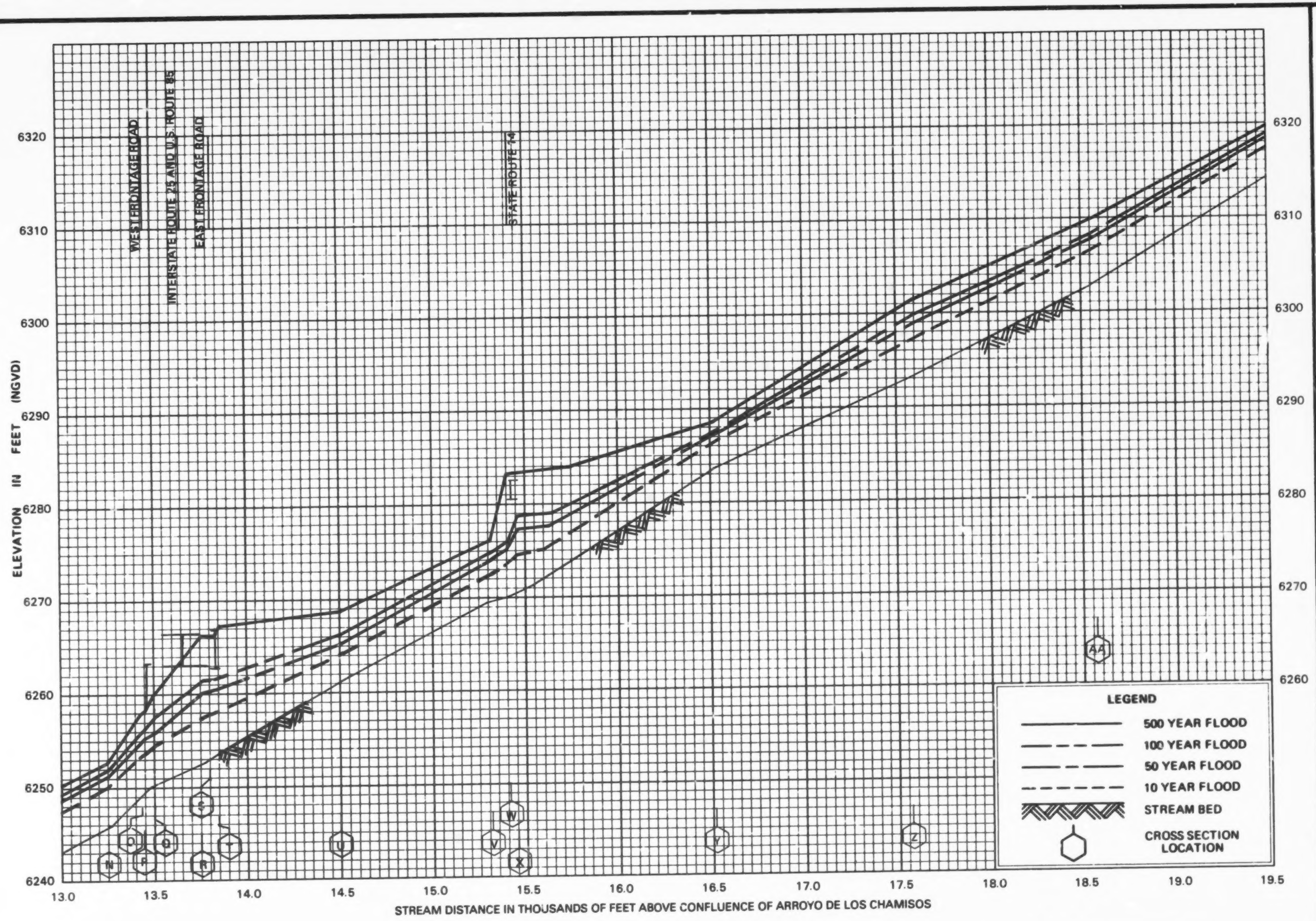

FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

10P

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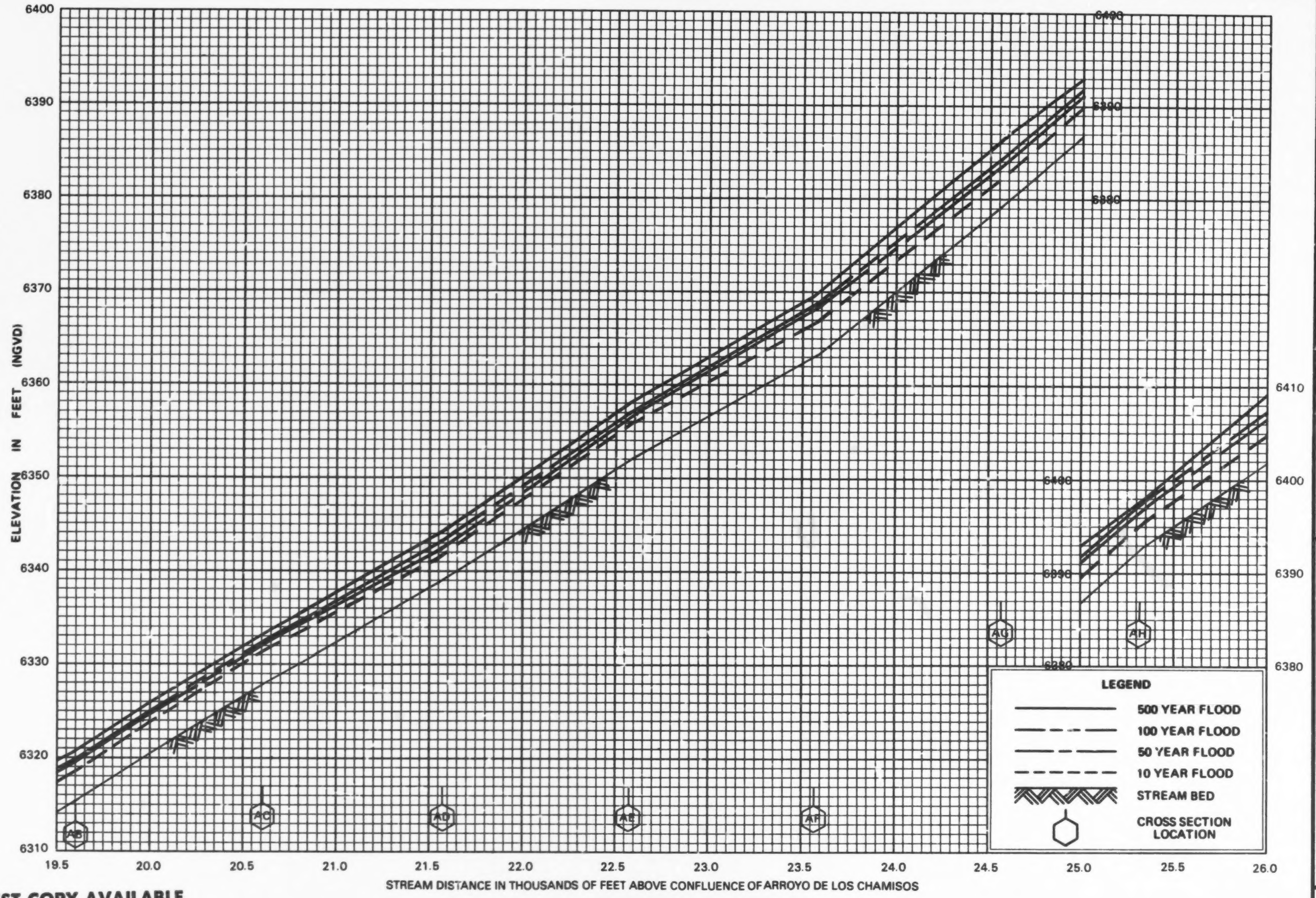

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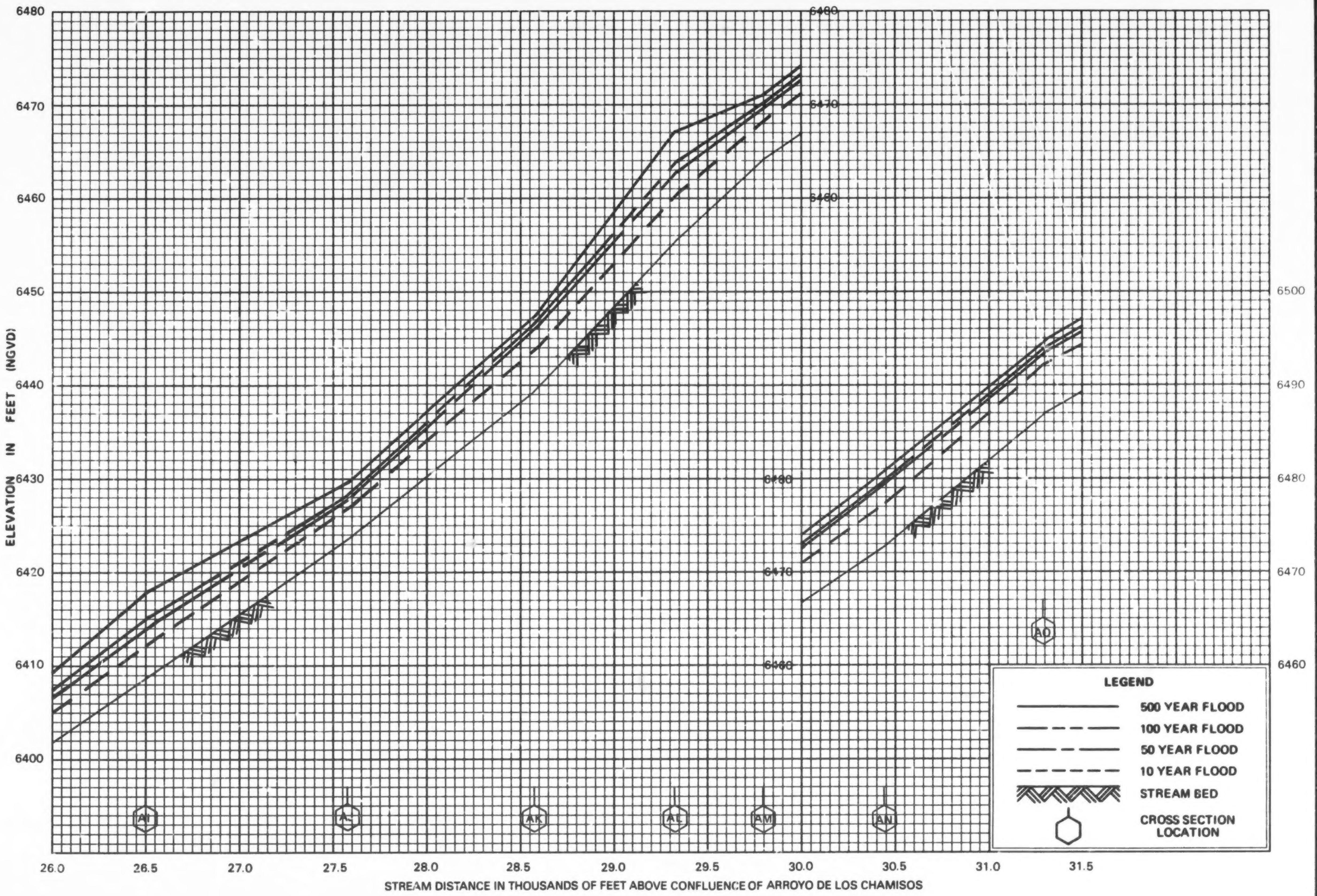
FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

11P



FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

12P

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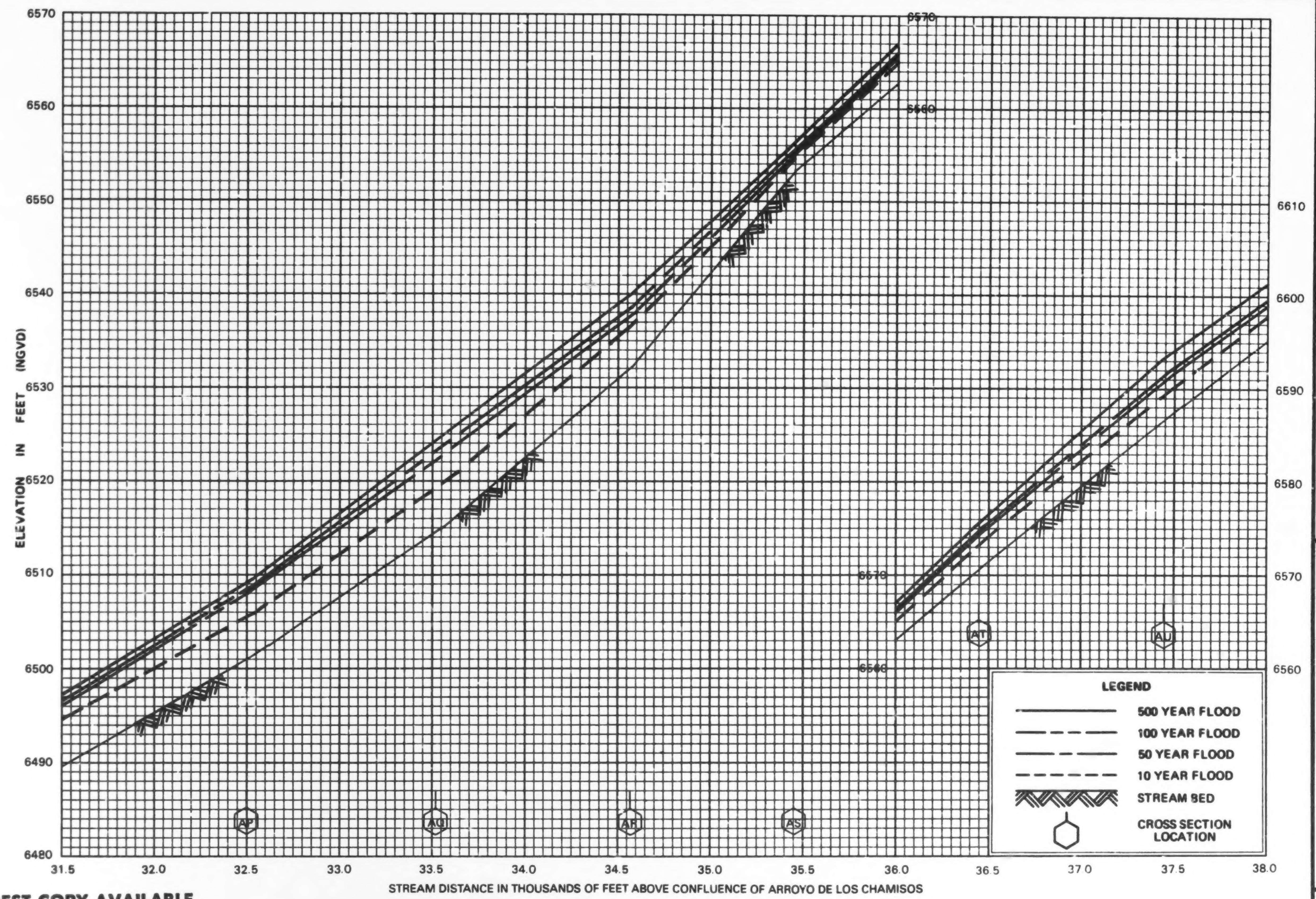

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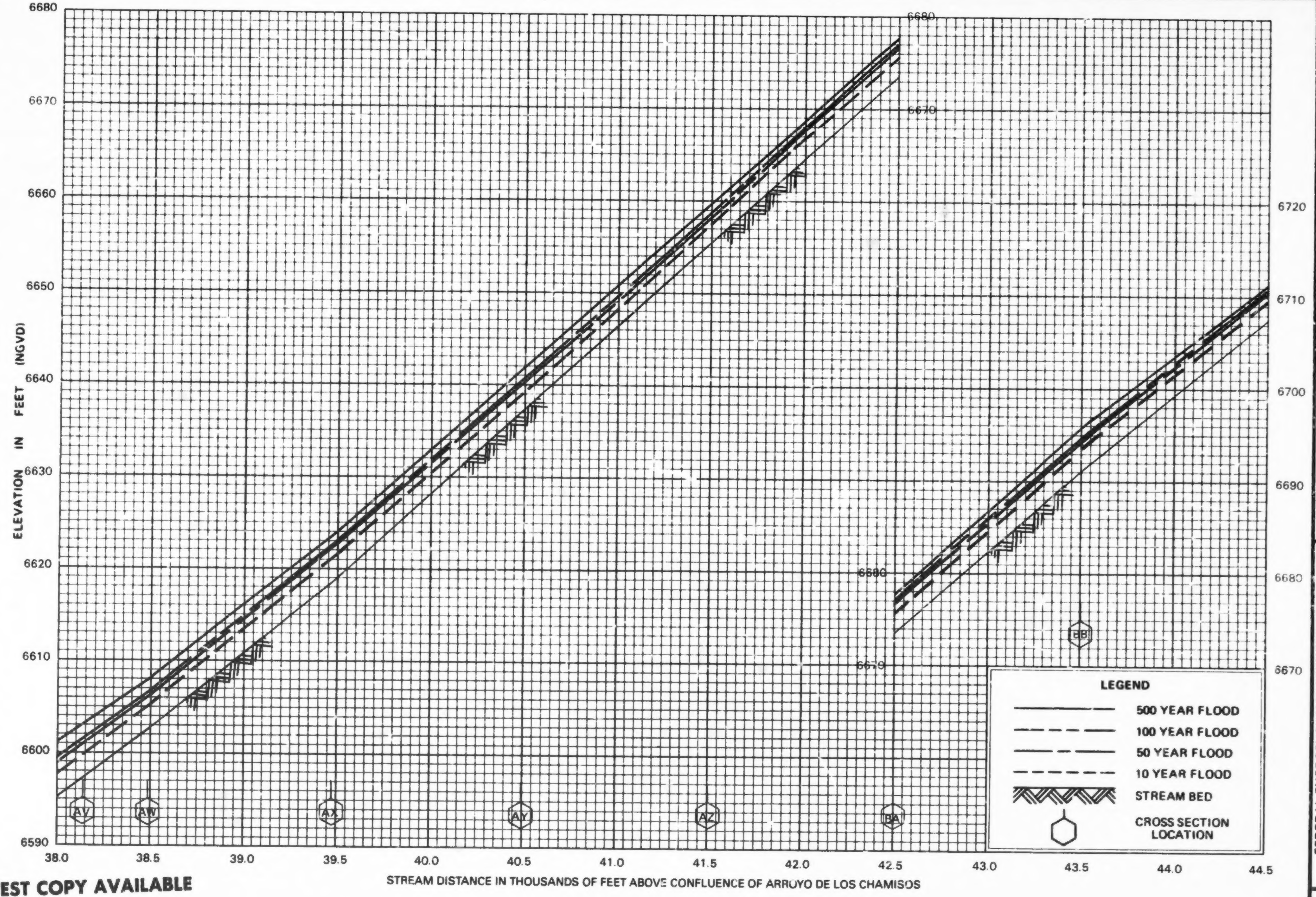
FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

13P



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FLOOD PROFILES

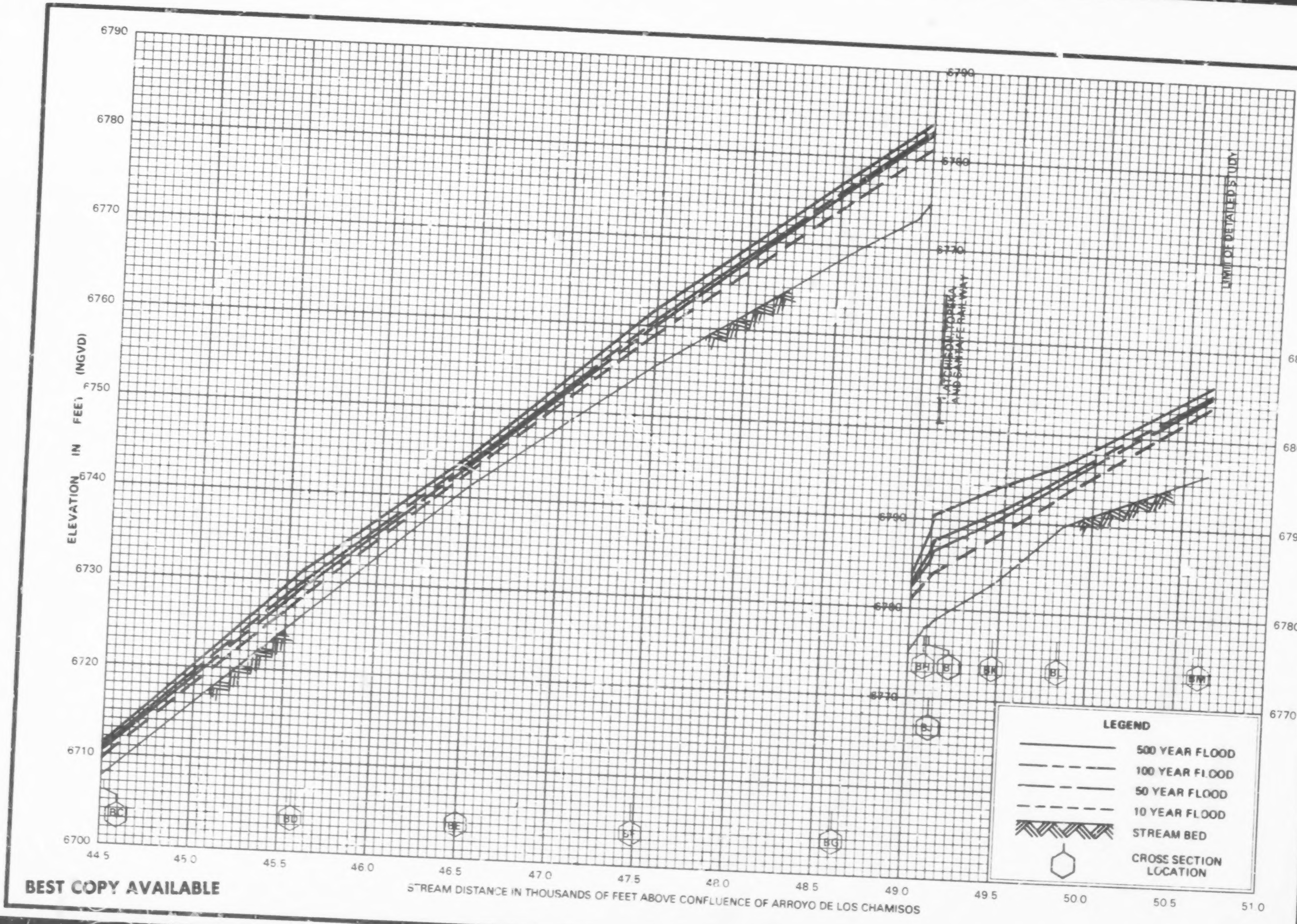
ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

55



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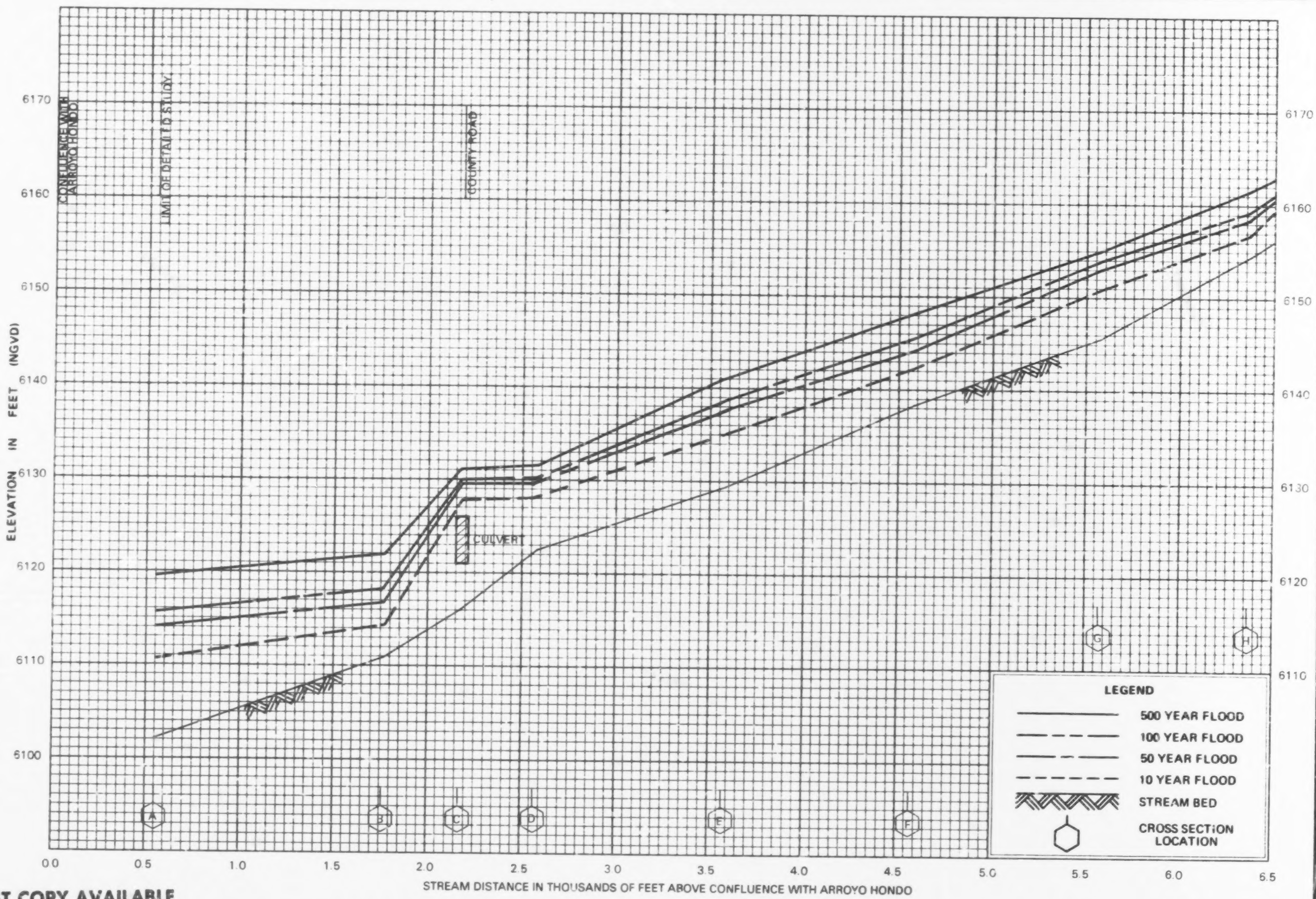
FLOOD PROFILES

ARROYO HONDO

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)



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FEDERAL EMERGENCY MANAGEMENT AGENCY

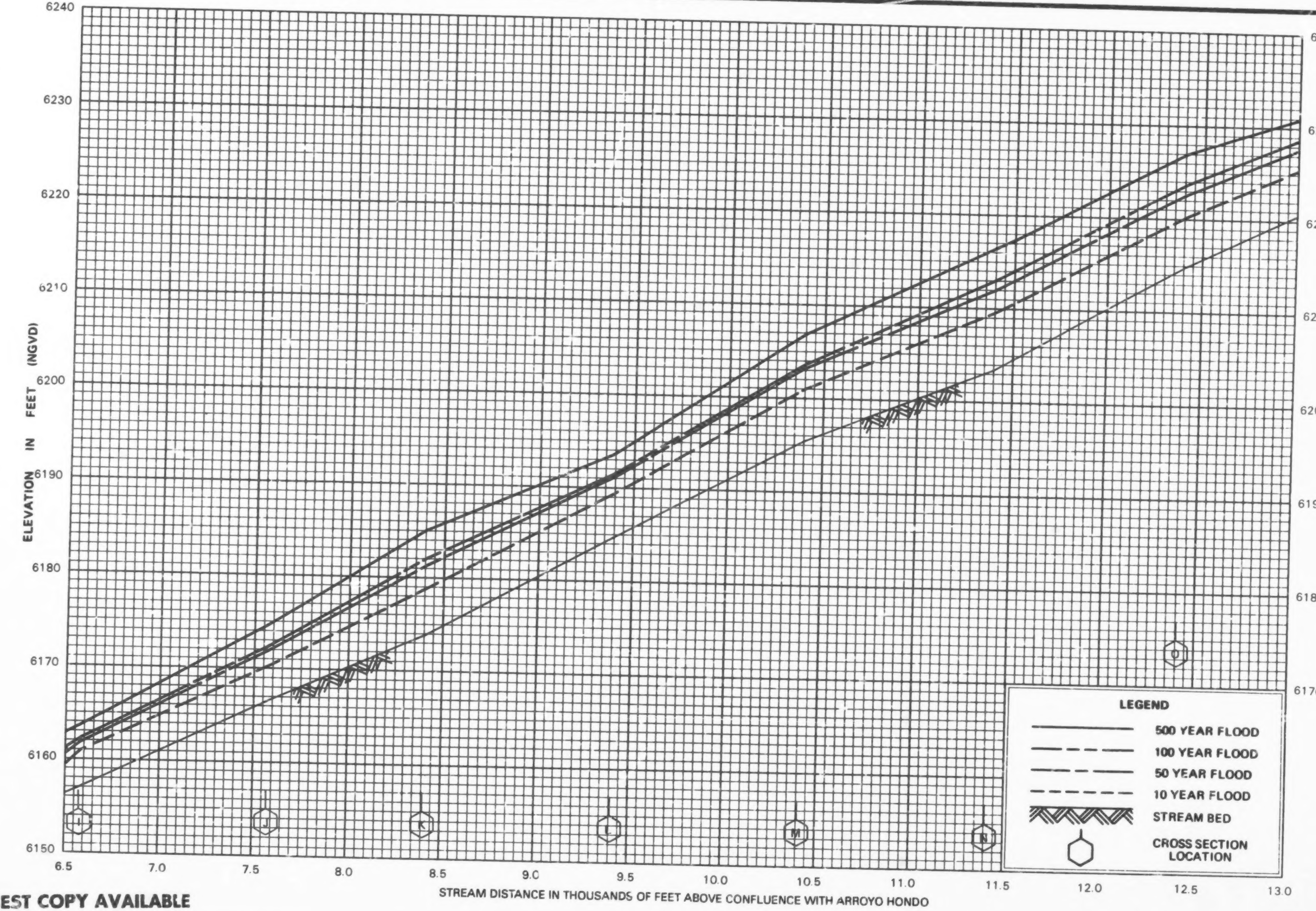
SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

FLOOD PROFILES

ARROYO DE LOS CHAMISOS

16P

57



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FLOOD PROFILES

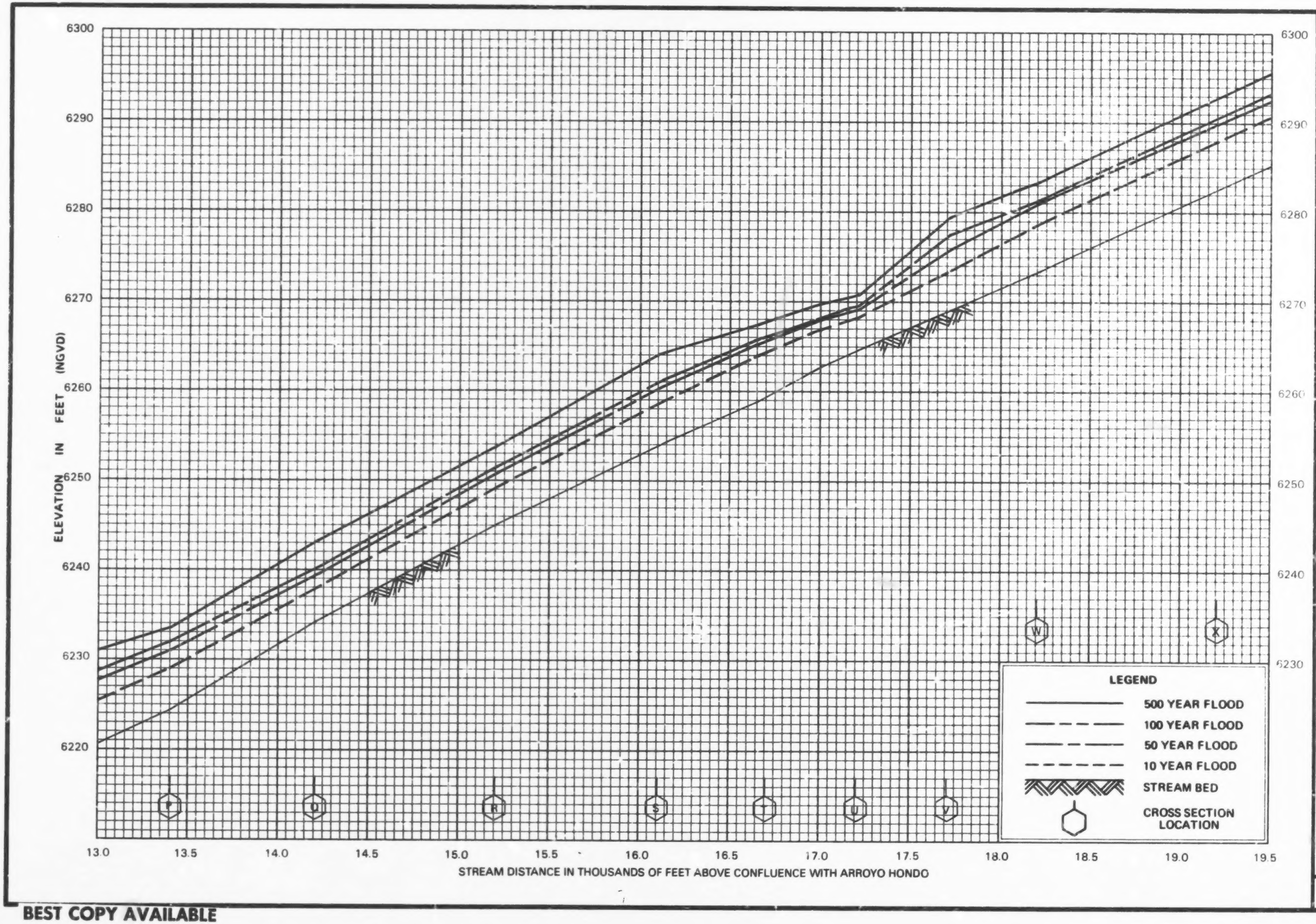
ARROYO DE LOS CHAMISOS

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

17P

58



FLOOD PROFILES

ARROYO DE LOS CHAMISOS

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

18P

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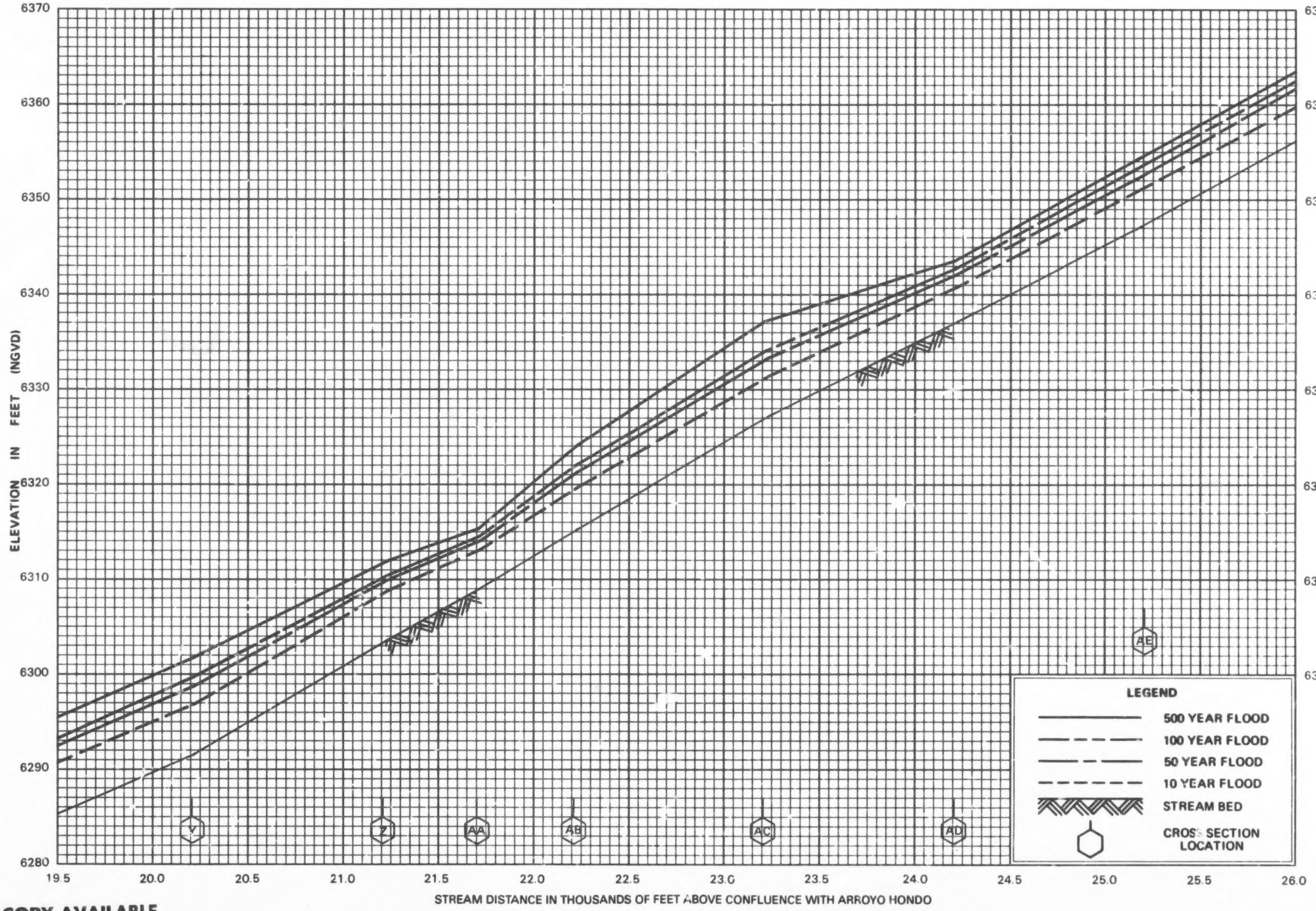

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FLOOD PROFILES

ARROYO DE LOS CHAMISOS

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

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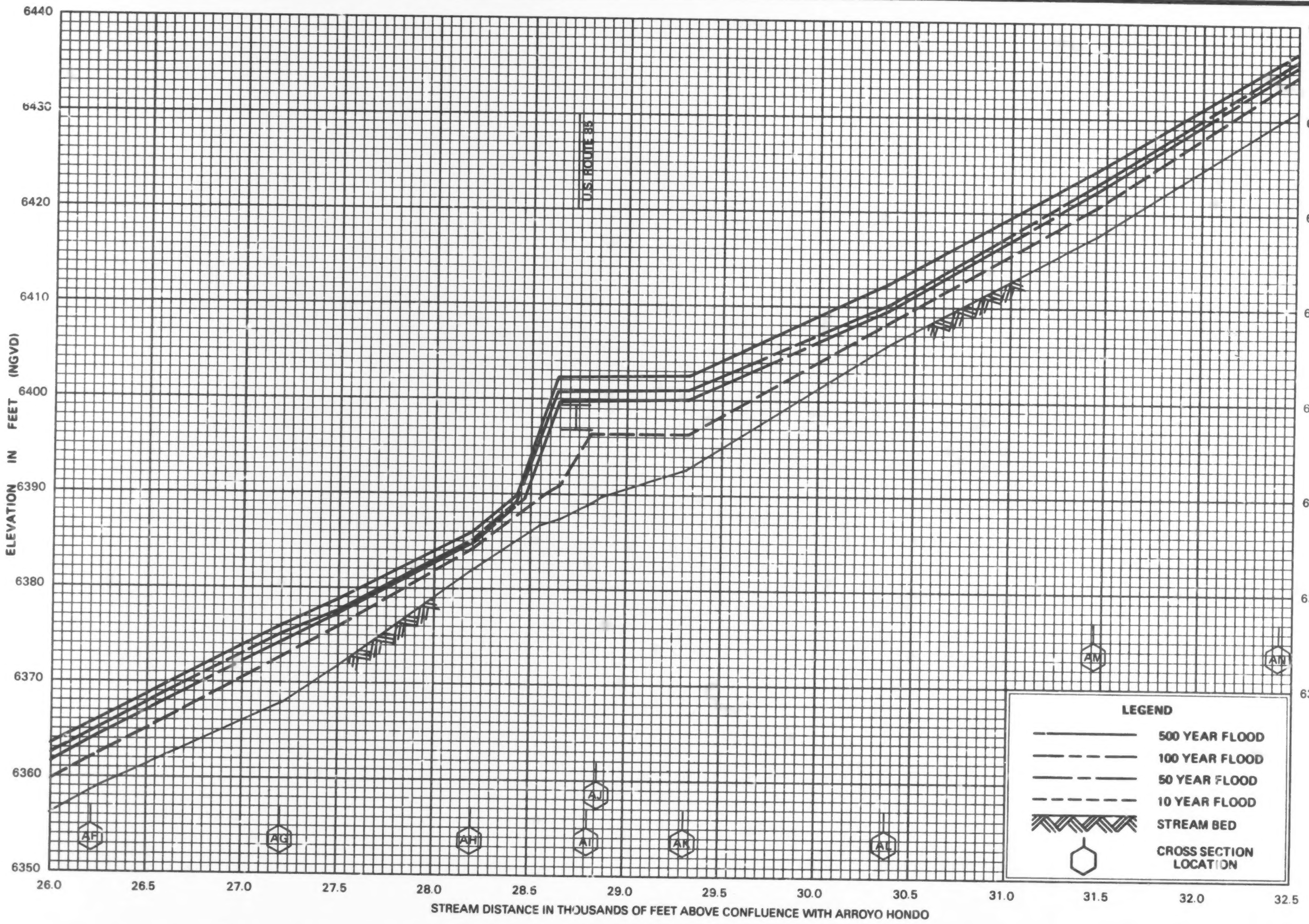

FLOOD PROFILES

ARROYO DE LOS CHAMISOS

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

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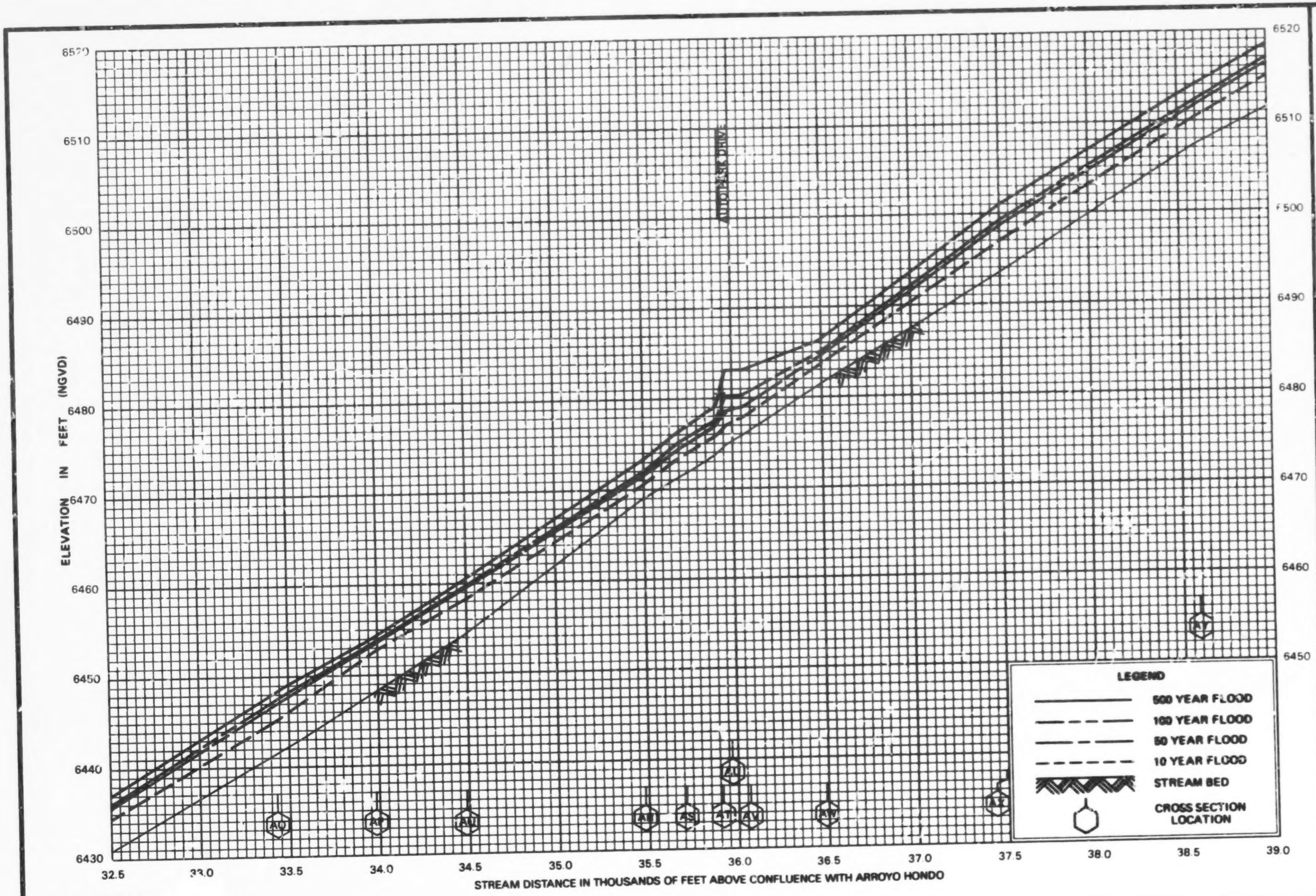

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FLOOD PROFILES

ARROYO DE LOS CHAMISOS

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)

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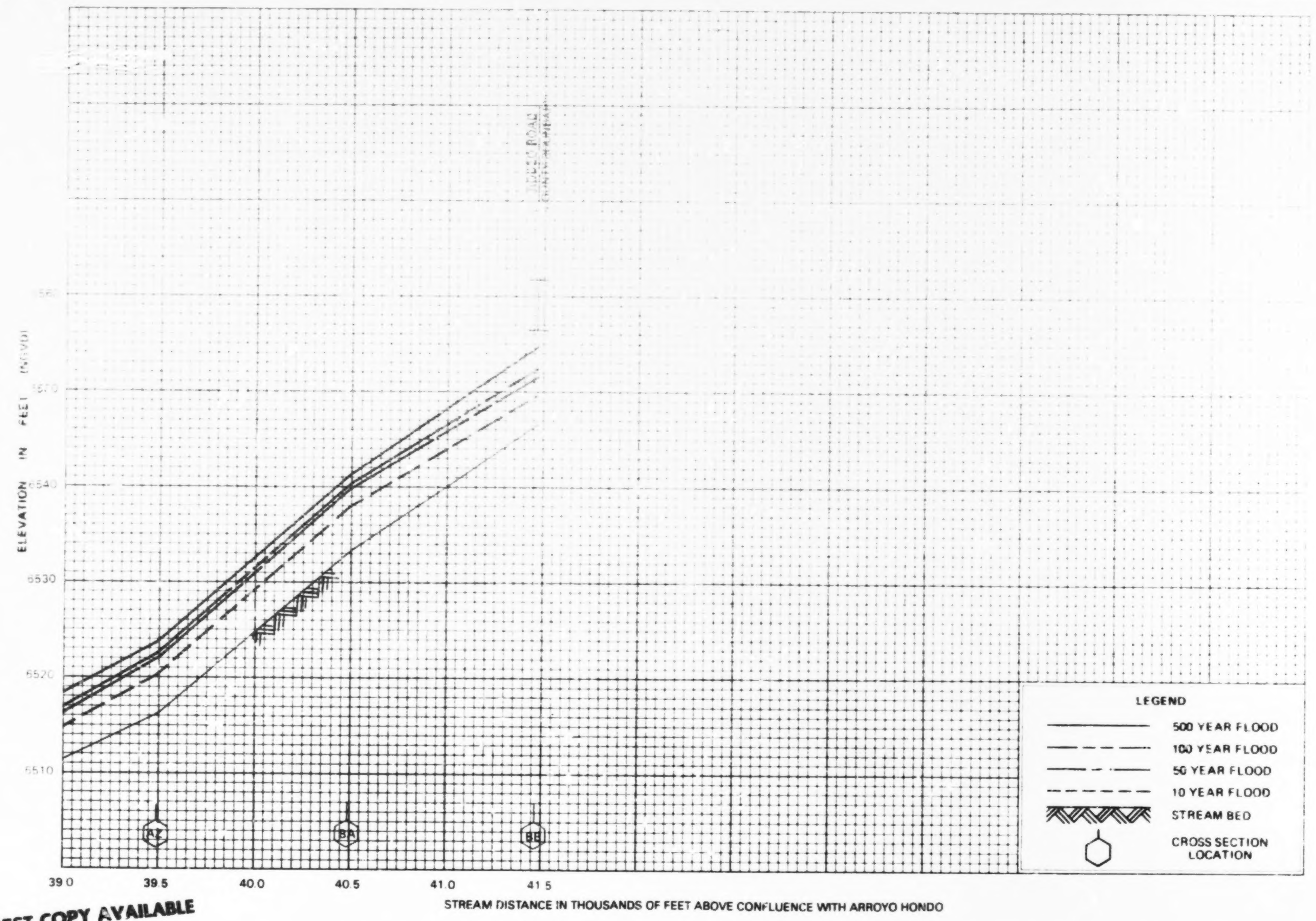

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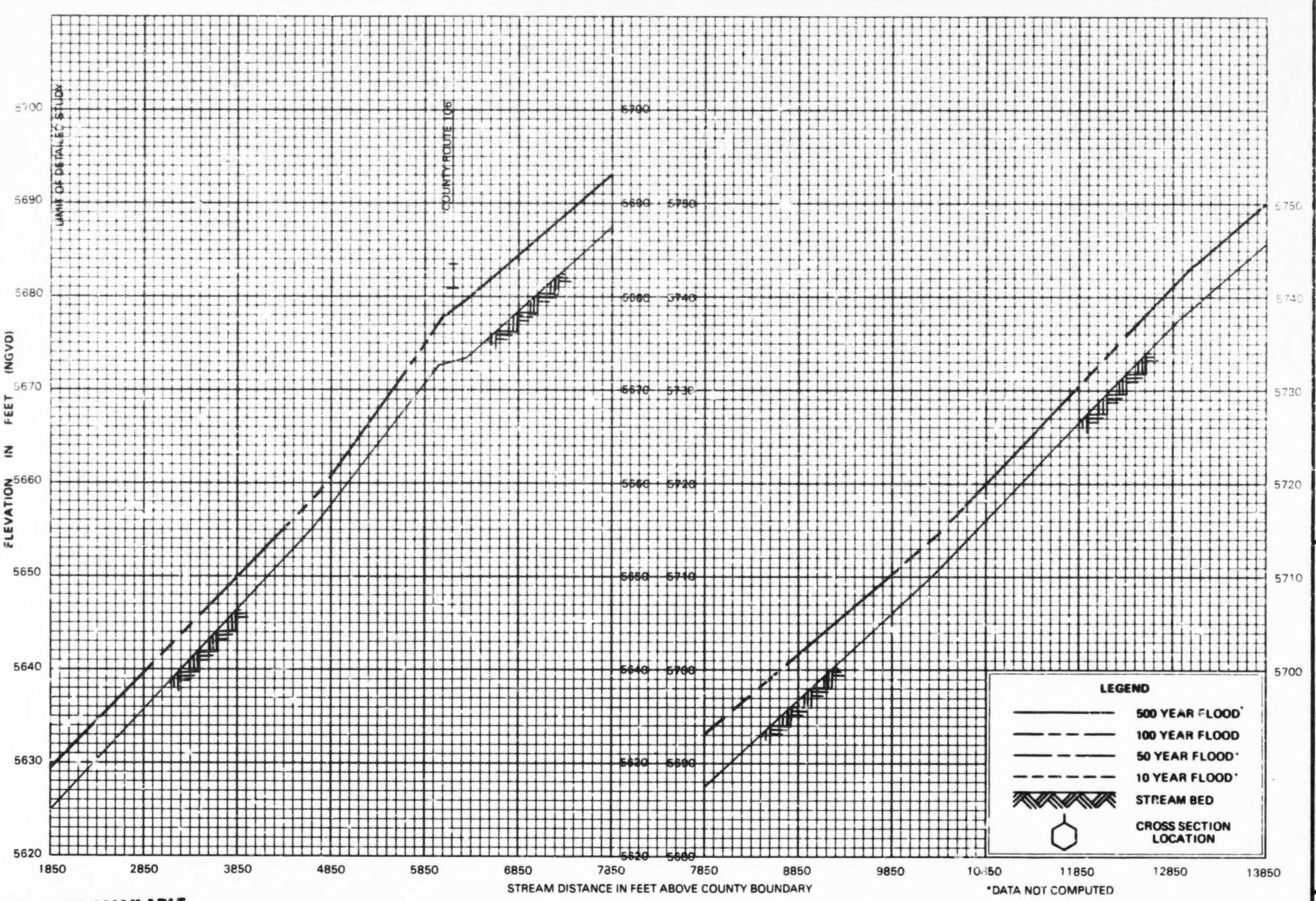
FLOOD PROFILES

ARROYO DE LOS CHAMISOS

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM
(UNINCORPORATED AREAS)



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FLOOD PROFILES

SANTA CRUZ RIVER

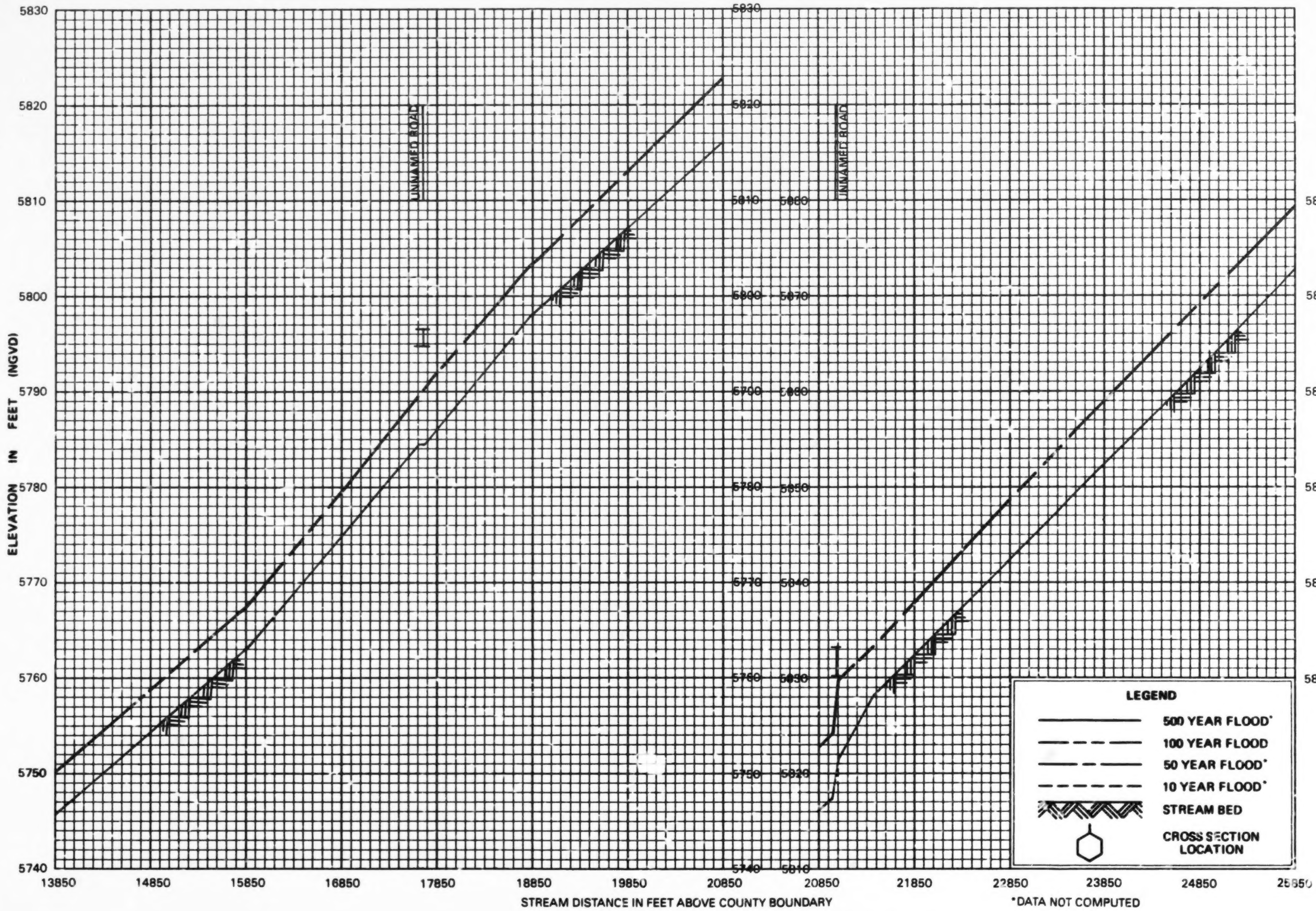
FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

23P

64



FLOOD PROFILES

SANTA CRUZ RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

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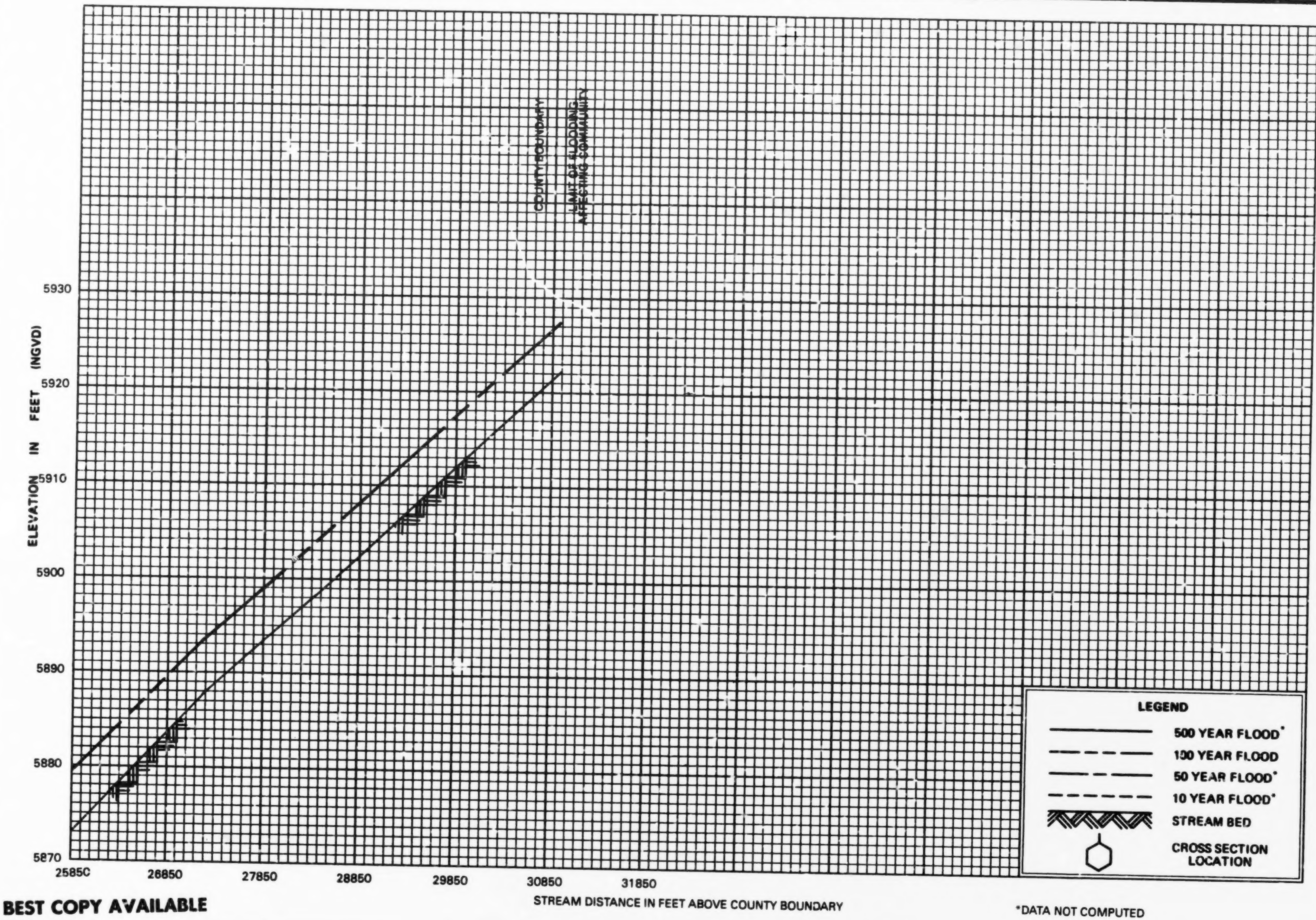

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FLOOD PROFILES

SANTA CRUZ RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SANTA FE COUNTY, NM

(UNINCORPORATED AREAS)

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